Illinois U Library

LIBRARY
UNIV. OF ILL. UNDERGRADUATE DIV.
NAVY PIER, GRAND AVE.
CHICAGO 11, ILL.
S

American Engineer

PLAN TO GO TO BUFFALO!

13th Annual Meeting

December 4, 5, 6
Hotel Statler
Buffalo, N.Y.

Professional Engineers!

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS
FOUNDED 1934

OCTOBER 1947

VOLUME 17 NUMBER 10

ATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

Official Call to N.S.P.E.'s 13th Annual Meeting

IT is my privilege and pleasure, on behalf of the membership of the National Society of Professional Engineers, to accept the gracious invitation of the New York State Society of Professional Engineers and the host chapter Erie County, and once again to issue this official call for the 13th Annual Meeting to be held December 4th, 5th, and 6th, 1947, at Buffalo, New York.

The meeting will convene in the Headquarters Hotel, one of a world-famous chain, the Buffalo Statler, in the beautiful city of Buffalo, metropolis of the western section of the great Empire State.

In this delightful setting, the Annual Meeting Committee will present a timely, significant program, augmented by the warm, enthusiastic hospitality of the members of the New York State Society and the friendship and good will of all those attending.

Just as NSPE members are expected to attend Member State Society meetings regularly, so the Member State Societies should be well represented at the NSPE Annual Meeting.

Each Member State Society is entitled to one or more voting delegates according to its membership. The NSPE Constitution and By-Laws give full information regarding the rights and responsibilities of a Member State Society with reference to the Annual Meeting. Matters of special importance may arise for determination at this meeting.

To all members I extend a most cordial invitation to attend the Annual Meeting this next December. It promises to be a memorable occasion.

Come, all of you, and participate in the inspirational program which cannot fail to assist the engineering profession to meet the challenge of the day and to face with confidence the developments of the immediate future. Come—and bring your ladies! Come for acquaintanceship—for fellowship! Come for entertainment! Many friends will be there to greet you to fill you with memories which will never fade. Come to Buffalo December 4th, 5th, and 6th!

Issued at Harrisburg, Pennsylvania,
September 2, 1947

Richard Lawrie Jr.

President

Illinois U Library

THE AMERICAN ENGINEER

Published monthly in the interests of the Engineering Profession

VOLUME 17, NUMBER 10

OCTOBER, 1947

THOMAS J. McBREEN, *Editor*

Business Manager
RUSSELL B. ALLEN

Publication Committee
C. GEORGE KRUEGER, *Chairman*
WILLIAM H. LARKIN
ALLEN HUBBARD

* * *

Publication Office
123 Market Place, Baltimore, Md.

* * *

Editorial and Executive Offices
1359 Connecticut Ave., N. W.
Washington 6, D. C.

* * *

Neither the American Engineer nor the National Society of Professional Engineers assumes any responsibility for statements or opinions expressed by contributors whose names identify the source of same.

Copyright—1947—The National Society of Professional Engineers.

* * *

Subscription Rates

$1.00 per year in advance to members of the National Society of Professional Engineers and its Affiliated Societies. $2.00 per year in advance to non-members in U.S.A. and its possessions, Canada and Mexico. Foreign, $4.00 per year. Single copy 25c.

* * *

Entered as Second Class Matter March 11, 1942, at the Post Office, New York, under the act of March 3, 1879—application pending for transfer to Baltimore, Md.

In This Issue—

Editorial 2

Fire Prevention Progress Reported by NSPE Groups and President's Conference 3

Georgia Fire Prevention Statute Offers New Approach to Old Problems 5
By Harry C, Robert, Jr.

New York and Chicago Meetings Launch Fall Membership Drive 7

Employment Practices Committee Reports on Taft-Hartley Law 9

Amendments to Registration Laws Show Work of Professional Groups 11

Engineers vs Politics—Education Offers One Answer 13
By H. W. Straley, III

Legislative Committe's Monthly Report 15

Member State Society Officers 20

National and State Society News 21

What's New for Engineers 24

THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS
***Headquarters:* 1359 Connecticut Ave., N.W., Washington 6, D. C.**

Vice-President
J. F. FAIRMAN
Vice-President of
Consol. Edison Co., of N. Y. Inc.
4 Irving Place
New York, N. Y.

President
RITCHIE LAWRIE, JR.
Consulting Engineer
Partner, Lawrie & Green,
321 North Front St.,
Harrisburg, Pennsylvania

Vice-President
WILLIAM L. THRAILKILL
Asst. Gen. Mgr. & Dir.,
Wash. Power Co.
1107 W. 7th Avenue
Spokane, Washington

Vice-President
ALEX VAN PRAAG, JR.
Vice-President of
Warren & Van Praag,
447 Standard Office Bldg.
Decatur, Illinois

Treasurer
RUSSELL B. ALLEN
Professor of Civil Engineering
University of Maryland
4610 Hartwick Road
College Park, Maryland

Executive Director
PAUL H. ROBBINS
1359 Conn. Ave., N.W.
Washington, D. C.

Vice-President
ALAN GRIFFITH STANFORD
Vice-President
Robert and Company
706 Bona Allen Building
Atlanta, Georgia

EDITORIAL

ENGINEERS AND FIRE PREVENTION

President Truman has proclaimed October 5-11, fire prevention week.

This reminds us of the series of disastrous fires which happened less than a year ago. Among them were the hotel fires in Chicago and in Atlanta—both of which resulted in heavy loss of life and property damage.

But the President's proclamation also reminds us of the very deep obligation which professional engineers have in protecting the life and property of our communities.

NSPE has never been unmindful of this obligation. But even those who are most alert, those who deal with safety engineering every day, were shocked by the disastrous toll that this unleashed fury was taking.

The magnitude of the problem was so great that the President of the United States decided to take action on a national scale. He appointed his Conference on Fire Prevention, which has functioned ever since under the general chairmanship of Major General Philip B. Fleming, who is also administrator of the Federal Works Agency.

Heavy Loss of Life and Property

At the time of making this appointment, President Truman said, "The serious loss of life and property resulting annually from fires causes me deep concern. I am sure that such unnecessary waste can be reduced. The substantial progress made in the science of fire prevention and fire protection in this country during the past forty years convinces me that the means are available for limiting this unnecessary destruction."

The President's act was a wise one. He called on "scientists,"—engineers and technically trained men—to apply the means and devices which they had developed over a period of time, to the solution of a very serious safety problem. It was truly a step in the direction of fire prevention rather than a move to strengthen and increase our devices and ability for fire fighting.

Actually, with a truly professional attitude, engineers had already taken the field in the fight against fire. They were fully aware of their responsibilities to the public and were already taking steps to meet those responsibilities.

NSPE President Ritchie Lawrie, Jr., issued his "call to arms" immediately after the Atlanta disaster. In it he outlined a four point program of action which professional engineers all over the country adopted as a starting point for their fire safety compaign. These four points were:

(1) Immediate inspection by proper public officials of all places of general assembly and occupancy, such as hotels, apartments, theaters, movies, night clubs, schools, churches, commercial and industrial buildings.

(2) This inspection to be followed by a report calling upon the respective owners of all such places to proceed immediately to eliminate any and all hazardous conditions—with a follow up to see that the job was done.

(3) There should be an examination of existing building codes to ascertain and put into effect amendments as may be necessary to insure a building plan, as well as the use of construction methods and materials which result in the erection of safe fire resisting structures.

(4) Engineers should support, and when called upon, assist public officials in their efforts to enforce the law.

These were the original rallying points for the profession in an intensified effort to combat the fire menace. When President Truman appointed his Conference, it provided an added stimulus to the program which the profession had already started. It offered extremely valuable public relations material which only the President of the United States could supply.

Now, 10 months after the Atlanta fire much progress has been made. Changes in administration of fire laws and regulations and changes in the laws themselves which have and will continue to improve the general fire prevention picture have been promoted and encouraged by many of our state professional engineering societies. Such changes have occurred in many states (See Jun AMERICAN ENGINEER, page 2). Others are still working on the problem, but for all, the job is not finished. Much work remains to be done.

The headlines have vanished. The orignal momentum, furnished by an aroused public opinion has diminished. In all too many state legislatures and city and community governments the danger of fire seems remote. It is possible that the good resolutions of ten months ago may be lost in the efforts of men to deal with *seemingly* more important current problems than fire prevention.

Thus, the President has proclaimed fire prevention week at an appropriate time. It will serve as a reminder to professional engineers throughout the country that fire prevention is *their* responsibility, that they must act and follow through on *their* programs in order to fulfill their obligation to society.

Day to Day and Year to Year

Fire prevention is not a thing which can be accomplished through revision of laws or through "jacking up" the administrators of laws. It is not a thing which can be accomplished as a complete job. The engineer—the scientist—can never say "I have just completed the job of fire prevention and will now turn my efforts to something else."

Fire prevention must be a continuing program. It must go on day to day and year to year.

An aroused public opinion will serve to provide a starting force whenever and wherever disaster from fire strikes. But it will never provide the constant steady force for all the days and all the years that are necessary to deal with the problem.

Thus, the Professional Engineer—the man with the training and the skill and the understanding must continually bend his efforts to provide for the safety of life and property from conflagration.

His responsibility here is one part of what means to be a *professional* engineer.

FIRE PREVENTION PROGRESS REPORTED BY NSPE GROUPS AND PRESIDENT'S CONFERENCE

In proclaiming Fire Prevention Week, President Truman said, "I earnestly request every citizen to eliminate all possible causes of destructive fire in his home and in his place of business, and I urge that vigilance against fire be extended beyond Fire Prevention Week and zealously continued throughout the year." The duty of the engineer is greater with respect to this request than is the duty of other citizens. The engineer must cooperate if we are to stop loss of life and property from this menace. Loss from fire cost the United States more than $560,000,000 in 1946.

resident Harry S. Truman is inuing his drive to reduce the ıal loss of life and property from He has proclaimed fire preven- week to be from October 5-11. Vhile fire prevention week is ob- ed annually, it has a particular ificance this year. It will be the fire prevention week since the s of tragic and costly holocausts h resulted in the President's ap- tment of his Conference on fire ention. These very serious fires ıded the La Salle Hotel fire in ago and the Winecoff fire in At- ı.

Changes in Laws

he work of this Conference, and efforts of the engineering profes- have resulted in some drastic ges throughout the country in fire prevention laws and in their inistration. Real strides have made to remedy conditions h permitted the disasters of one ago.

n early step in the program was holding of the President's Con- nce in Washington, D. C., May This group adopted an Action gram which has been the basis procedure in many states. (See ERICAN ENGINEER for June, page Meanwhile, certain states were content to wait for the Presi- 's conference to meet and recom- d a procedure. Among these was rgia (See June AMERICAN ENGI- R, page 2) whose legislators were ly aware of danger from fire use of the Atlanta Winecoff e which was particularly close to and which was perhaps the tragic of the conflagrations t that time. (For data on pro- ns and Administration of the rgia Law, see page 5.)

her states had already taken ac- including Rhode Island, Indi- New York, and Washington. ever, satisfactory steps had not completed in all of these states. nce the meeting of the Presi- s Conference, adoption of the on Program, and appointment of a continuing committee to deal with the problem, the following states have taken action along the lines recommended by the Conference, particularly as to state committees:

Kentucky blazed the trail with a two-day state-wide conference held on July 16-17 to which the governor invited mayors and fire chiefs as the guests of the state. The conference was held in Louisville, and the program is off to a splendid start.

New Hampshire held a state-wide conference during August. General Fleming modified his vacation plans in order to appear as the principal speaker. A state fire safety committee, already organized made plans for the conference which was the second such statewide meeting to be held.

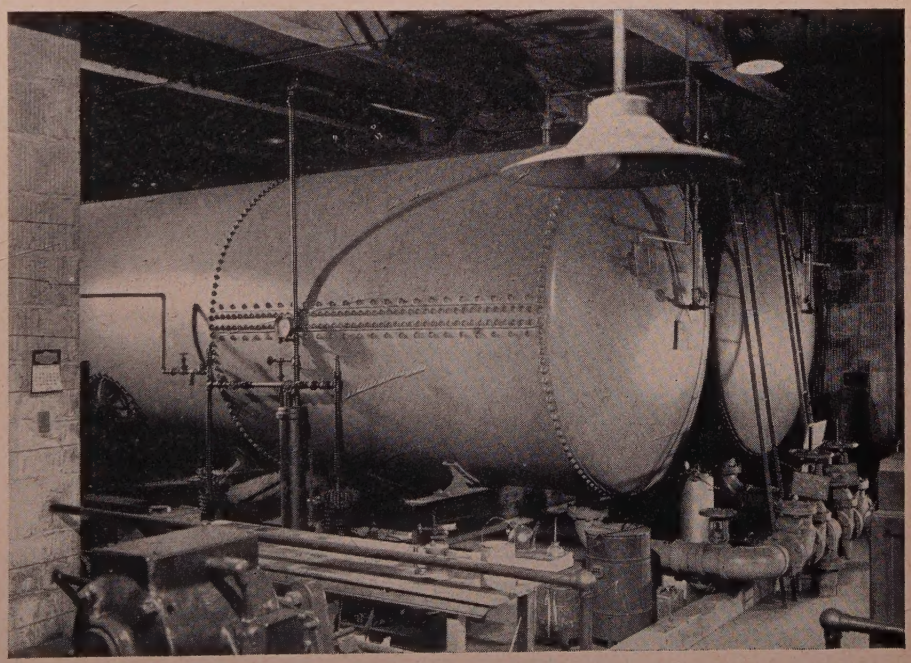
Massachusetts' governor has received a complete report from the delegation which attended the President's Conference, and has agreed to call a state-wide conference during the week preceding Fire Prevention Week in late September and early Octobr.

Maine has reported that a state-wide conference will be called in the early fall.

Ohio is very active. A strong state fire safety committee has been appointed by the governor and plans will be under way for a conference in the fall. The fire safety committee has been organized on the basis of the Conference itself with subcommittees dealing with the same phases of the problem.

Texas' governor has appointed Marvin Hall, Fire Insurance Commissioner and ex officio State Fire Marshal, to act as Chairman of a 28-member committee on fire prevention and protection for the state. The organizational meeting of the committee was called for August 7. Governor Jester asks the committee "to take the most comprehensive and far-reaching action to protect life and property."

Illinois' Governor Green has charged State Fire Marshal Craig with the responsibility for organizing



Feed tanks for automatic sprinkler system

Engineer points to automatic release on fire door.

a state-wide program. The governor has agreed to invite 3,000 delegates to a state-wide fire safety conference and Dick Vernor of the Western Actuarial Bureau who is very active in the President's Conference has been invited to serve as Chairman of this conference.

Minnesota is also on the active list, and General Fleming has promised to make the opening address in Minneapolis when a state-wide conference is held within the next few minths.

A large number of letters have been received from governors, attorneys general, mayors and other public officials in other states, expressing their interest in the program and their intention to get actively behind the Conference recommendations. As yet, it is too early to report definite plans in states other than those already listed.

Meanwhile, prompted by NSPE member groups, some cities have taken steps to improve their fire rules and regulations. Notable among these is New York City which has supplemented the state law with amendments to its Administrative Code to cover certain types of multiple dwellings not included in the state legislation. The New York State Society approved of the municipal legislation, but strongly objected to provisions which make it possible for the Commissioner of Buildings to overrule decisions for the protection of life, health and property made by the Borough Superintendents who are required by Civil Service regulations to be licensed professional engineers or architects.

In commenting on this aspect of the legislation, NYSSPE President William Larkin said: "The NYSSPE supports the intent of the bill but holds that its purpose of protecting lives and property is nullified by the placing of wide discretionary authority in the hands of political appointee with no techni experience and training in structu design and practice." Mr. Lark also contended that the spirit of t State Education Law was violat by the measure and pointed out th under the amendment it would possible for a person without expe ence and training in such matters make a decision which might lat result in great loss of life.

Members of NYSSPE present these views to the Mayor before t legislation was signed, but the May proceeded without regard to the contending: (1) that the Comm sioner has the benefit of the profe sional knowledge of his subordinat and (2) that he wants one man, t nominal head of the department, rectly responsible to him.

In Dayton, Ohio, the local chapt of OSPE has appointed an Adviso committee to work with the Chi Inspector of the Fire Preventi Bureau. The Committee assists drafting enabling ordinances to pe mit the adoption of more rigid stan ards and codes for fire preventi The advisory group is composed members from all branches of t engineering profession concerned any way with fire prevention. Th it is competent to deal from a tec nical standpoint with all of the ma and varied problems involved.

Meanwhile, activity of the Pre ident's Conference has continu through a group of national Comm tees which have been establishe These include the Committees on C ganized Public Support; Fire Pr vention Education; Fire Fighti Services; Research; Building Co struction, Operation and Protectio and Laws and Law Enforcemen Each of these committees has su mitted a report to the Conferen and each recognizes the role of e gineers in fire protection.

Organized Public Support: its report, this group recognizes th it must have the support of the e gineering profession in order for t fire prevention program to succe Its major purpose is to muster su port of important organizations fire prevention. In its report, states:

"Over the years, the approaches the accident problem have been po ularly designated as the Three E of Safety—Engineering, Enforc ment and Education. These Thr E's are equally applicable to fire pr vention and protection."

Consequently, this group may

(*Continued on Page* 16)

Georgia Fire Prevention Statute Offers New Approach to Old Problem

By HARRY C. ROBERT, JR.

WE Americans have achieved a reputation for incompetence because of the manner in ich we apply or fail to apply our at sum of technical knowledge to betterment of society.

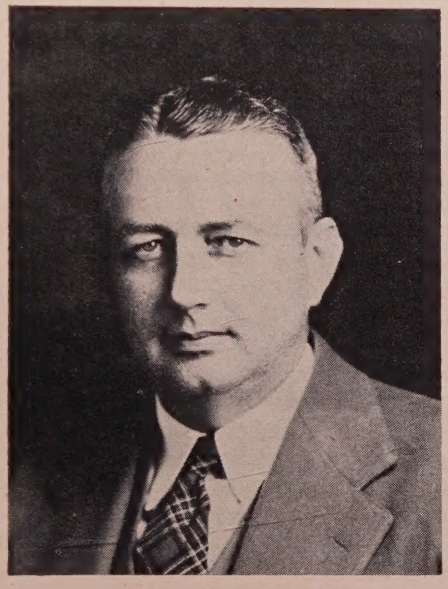
Few better illustrations of this t can be found than our handling public safety. One important se of public safety is "building ety" which we attempt to provide means of community and state ulations generally referred to as lding codes. We know there is ime lag of some twenty years be-een the development of technical owledge and its incorporation in codes because the best informa-n available indicates that one-half our building codes are more than enty years old. As deplorable as s time lag in applying our knowl-ge may be, it is less serious from safety viewpoint than the ar-ic administrative precedents and solete or erroneous legal concepts ich hamper the enforcement of ny of our codes.

First Comprehensive Code

History tells us that the public in-ia with regard to building regula-ns is overcome only when some mendous loss of property or tragic s of life occurs. The first com-hensive code along more mod-n lines was prepared by the Na-nal Board of Fire Underwriters in 05 as a result of the Baltimore fire preceding year. The valuable rk of the Committee on Safety to fe of the National Fire Protection sociation was started in 1913 as a ult of several fires where many es were lost because of inade-ate exit facilities to permit escape m burning structures. The Wine-f Hotel fire in Atlanta on Decem-7, 1946, where 119 persons lost ir lives in a "fireproof" hotel fol-ved by a few months a similar oc-rence in the La Salle Hotel in icago. These tragedies have dem-strated to the public the great dif-ence between "fireproof" and resafe" structures and people oughout the country are demand-that their community and state vernments take action that will vent such disasters in the future.

Georgia's Answer

The new Georgia Building Safety Law is the answer of the State of Georgia to this popular demand. Since it is the first attempt by this state to regulate building safety and since also it was recognized that the major part of the immediate problem is to correct unsafe conditions in existing structures, this new law is by no means as comprehensive as some of our states have developed through long experience in the building regulation field. The sole purpose of the act is to protect human life. Regulations for the protection of property are not authorized. The



HARRY C. ROBERT, JR.

only mandatory technical provision in the act provides that regulations must include requirements for exit safety consistent with the Building Exits Code of the National Fire Protection Association also known as American Standard ASA 9.1-1946. Ample authority is provided to permit other regulations such as requirements for structural safety. While nothing new or novel is contemplated in so far as technical requirements are concerned, the same is by no means true of the administrative provisions of the act. These departures from the precedents of the past are of interest to most engineers since they attempt new approaches to some of the problems which many of our communities have failed to solve.

The administration of the law has definitely been put upon a professional level. While this has been done before, few such laws have gone as far in this direction as the new Georgia law. Administration is the responsibility of the Comptroller-General as ex-officio Insurance Commissioner. This official is an elected constitutional officer of the state. A board consisting of seven citizens named by the Governor and known as the Building Safety Council advises the Insurance Commissioner and guides the administration of the law. The Commissioner and Council will function through a full-time appointed executive officer known as the Building Safety Director. The Director and not less than four members of the Council must be registered architects or professional engineers. The Director is appointed by the Commissioner subject to the consent and approval of the Council.

Professional Engineers' Role

The operation of the law is simple. Within two years, the owner of every building in the state with the exception of one and two-family private residences and farm buildings must obtain a certificate of Occupancy from the state. In the case of existing buildings the issuance of these certificates will be based upon representations made in a report of an inspection of the premises made by a qualified person employed by the property owner for that purpose. For buildings of more than three stories or where the occupancy is 200 persons or more, the law requires that such inspections and reports must be made by registered architects or professional engineers. For other less hazardous buildings, the Council may prescribe less stringent qualifications for the persons making such inspections. Certificates will only be issued where buildings meet the standards of exit safety and other requirements of the law. Under certain circumstances "Emergency Permits" may be issued permitting the use and occupancy of sub-standard structures for periods of not more than one year. Buildings used under emergency permits must be posted to warn the public and such special measures taken for the protection of the public as the Council may require. After two years it becomes unlawful to use or occupy a building for which no certificate or permit is in effect and

officials of all political subdivisions of the state are prohibited from issuing business licenses or permits to conduct any business in a structure for which certificates or permits are not in effect. If the type of occupancy is changed, the standards for the new occupancy must be met and a new certificate obtained.

The provision of the law that certificates must be renewed at intervals to be determined by the Council, but not exceeding five years, appears to be a new idea in the regulation of building safety. In many communities there has developed a legal concept to the effect that a building permit is a perpetual contract between the public and a property owner which the public cannot modify even though subsequent experience proves the terms of the agreement to have been unwise and entirely inadequate for the proper protection of the public. It is this idea that has generally prevented enforcing authorities from requiring owners of old buildings built under previous codes or before the adoption of any code to correct unsafe conditions in such buildings. This was true of the Winecoff Hotel. The Winecoff conformed to the Atlanta Code of 1911 which was in effect when it was built in 1913. It did not meet the requirements of the code adopted in 1924 or the most recent code of 1945. The only powers under which the building officials could have proceded against this hotel are certain general powers covering the abatement of nuisances. Now a nuisance is such because of popular agreement rather than any expert opinions. Storage of dynamite in your basement is a nuisance that is not permitted. It is not a nuisance because some experts testify that it can be detonated accidentally in several ways and further that if it exploded it would cause considerable damage to the neighborhood. Actually the storage of dynamite in your basement is a nuisance because all of your neighbors are scared to death of the idea. For this reason it is very doubtful if such proceedings would have been successful in the case of the Winecoff since it could have readily been shown that more communities condoned such hazards than took effective steps for their elimination. It is believed that the requirement for renewal of certificates of occupancy each five years is a straightforward and simple way of correcting this condition which has prevented so many previous codes from being effective, particularly where existing buildings are involved. The five year renewal period will also result in a very reasonable average time lag of about two and one-half years in putting any additional or stricter requirements into effect if future experience should indicate a necessity for such action.

Delegation to Communities

The Georgia Building Safety Law definitely provides for delegating the actual operation of the law to local communities provided they centralize responsibility for building safety in a properly qualified official. The principal inducement for the local communities to take over this function is the unquestionable convenience to the citizen by making it possible for him to deal with people he knows and to obtain all required permits for construction or alterations from one source. It is believed that most local building officials will desire to undertake the additional work involved in handling the state law since it will give them additional authority and a nucleus of most important building safety measures which cannot be waived or modified by local governments as a result of political pressure. To coordinate this feature the law requires that one member of the Building Safety Council must be the chief building official of one of the larger cities in the state.

All of the administrative features of the law were very carefully designed to minimize the size of the organization to be required at the state level. The Building Safety Director will have sufficient clerical help to operate a central file on all buildings covered by the law and sufficient deputies and other technical help to handle the issuance of certificates for buildings located in portions of the state where operation of the law is not delegated to the communities. The Director is also required by the law to make necessary inspections of state owned buildings and to make spot checks of the operation of the law in communities where the operation is delegated and also make spot checks on all reports filed as the basis of issuance of certificates of occupancy. While the final effectiveness of any spot check system is always questionable, it is hoped that the penalty of automatic revocation of any certificates obtained by fraud or any misrepresentation will help to make it reasonably effective in this case. The professional integrity of registered architects and engineers is relied upon to insure the conformance of all major hazards with requirements of the law. Th final answer can only be obtaine through actual experience.

Report to Legislature

The new Georgia law also permit the Building Safety Council to rec commend for the guidance o builders complete codes for building and their appurtenances which ma be followed in portions of the stat where no other codes are applicable The Council is also required to re port to the next legislature in Jan uary 1949 regarding the effectiveness of the law and to recommend an modifications in the scope or othe provisions necessary for accomplish ing its purpose of protecting life

The Comptroller-General o Georgia and ex-officio Insuranc Commissioner is the Hon. Zac Cravey of Atlanta. The members o the Building Safety Council ar Harry C. Robert, Jr., Atlanta, Struc tural Engineer, Chairman; E. M Myers, Atlanta, General Contractor Vice-chairman; Felton Davis A. I. A., Valdosta, Architect; Hug McMath, Columbus, Mechanical En gineer; Henry C. Beaty, Savannah Electrical Engineer; O. Marvin Har per, Atlanta, City Building Inspec tor; and Ray A. Greene, Columbus representative of labor. The Build ing Safety Director has not yet bee selected.

Origin of Law

Of particular interest to all profes sional engineers is the origin of th new Georgia Building Safety Law The bill was prepared by a specia committee of the Georgia Societ of Professional Engineers workin with representatives of the Georgi Society of Professional Engineer working with representatives of th Georgia Section of the American In stitute of Architects at the invitatio of a committee of the Georgia Legis lature headed by Chas. L. Gower Attorney, of Brunswick. The legis lative committee placed no restric tions on the committee drafting th bill and very ably sponsored and ob tained the passage of the law sub stantially as recommended by th representatives of the design profe sions. We trust that with the coop eration of the legal profession, stat and local officials and the public, th law can be made to accomplish it purpose, or at least be given a fai trial. In any event we shall have a opportunity to observe this attemp to use simple straight forwar methods, devised by the professio for the purpose of regulating build ing safety.

New York and Chicago Meetings Launch Fall Membership Drive

SPE's fall membership drive has ed into high gear as the result o recent area membership meet-

stern area membership committ- chairmen, representing seven , met in New York city on mber 27, while chairmen of the al Area committees met in go on August 2. Six state so- s were represented at the Chi- meeting.

nong those present at the New meeting were: Clayton Miller, bership Chairman for the East- Area; A. E. Cooke (Conn.); Mannucia (District of Colum- Col. J. A. Pratt (Md.); Gust esteen (N. Y.); Paul White); E. S. Umstead (R. I.); J. N. ace (W. Va.). Also attending : Ritchie Lawrie, Jr., NSPE dent; James F. Fairman, E Vice-President for North- rn Area; Paul H. Robbins, E Executive Director; William arkin, NYSSPE President; and ge Barrows, executive secretary e New York group.

e Chicago meeting was attended Herbert Moore, Central Area bership Chairman; A. V. Court- (Mich.); A. B. Heiberg o); and Samuel R. Snead c.). Others present included ence Peterson, NSPE General rman of Membership; Bruce ams, Director (Mo.); Milton Holloway, Illinois Field Secre- and J. B. Wilson, executive tary from Indiana.

oceedings of the Eastern Area ng may be summarized as fol-

ter the introduction of the E representatives and a brief from each of them on the im- nce of membership and the nt status of society growth, representative outlined the pro- and activities of his State So- in promoting membership. Con- ble enthusiasm was evident and iety of technics were explained. dly rivalry was engendered will tend to increase the efforts ch locality.

e Connecticut Society reported t is now enjoying an aggressive am of activity after having been vated and considerable enthusiasm exists in the promotion of local membership activities.

The District of Columbia reported that the present uncertainty of Federal employment has, to some degree, affected the membership promotional activities but they reported an encouraging number of new applicants and high hopes that their quota for 1947 will be met.

Colonel J. A. Pratt, President of the Maryland Society, reported considerable activities of a personal nature in Maryland membership promotional activity. He indicated there is need throughout the State for more information regarding NSPE and pointed out some of the difficulties experienced in chapter organization.

One of the most aggressive membership programs is being carried on by the New York State Society and a number of incentives have been instituted as added promotional interest. The New York State Society annually awards to the chapter having the greatest percentage increase in membership the President's gavel which has been found effective in maintaining membership activities. This year, for the first time, the gavel will be presented on the basis of several factors which it is felt will give greater equality and recognition to all chapters.

A most ambitious program is being developed by the Pennsylvania Society. Its Statewide promotional efforts are bearing considerable fruit and those conducting the membership drive confidently predict it will be the second largest NSPE Member State Society by the end of this year. Paul White outlined many of the features of the program of the Society and considerable interest was evident in their activities.

The Rhode Island Society has been showing a good percentage increase and has confidence that its membership activities will bear even greater fruit the remainder of this year.

Some of the problems faced by the West Virginia Society were explained in detail by Mr. Wallace of that organization. While the gains in West Virginia have not been as outstanding as in other States, Mr. Wallace believes a good foundation is being laid and that further membership increases will be forthcoming. ing.

The exchange of ideas by the various membership chairmen was believed to be extremely worth while. Considerable commendation is due each of the members who attended, since it was at their personal sacrifice and interest that the meeting was possible. The entire membership of NSPE will look forward to the report of the membership chairman at the Annual Meeting, December 6th, as being the final measure of the success of the programs outlined.

Major developments at the Central Area meeting which had already been held in Chicago included the following:

NSPE Membership Chairman Peterson started the meeting with a summary of the membership situation at the national level, including comments on the prospects and achievements of the Central Area Member State Societies. He stated that NSPE numbered 16,080 members at that time and that the membership drive was proceeding well with the Northeastern Area leading the increase with 977 new members. The Central Area was second with 950 new members. He also commented on promotional plans including the distribution of NSPE's Legislative Bulletin to all registered engineers in many states.

Following Mr. Peterson's remarks, reports were received from the various states on membership activities, as follows:

Illinois: Mr. Holloway dealt with the efforts of the Illinois Society to increase membership according to long term and immediate methods.

1. Long Term.
   a. Circularization of all graduating seniors from accredited engineering colleges in Illinois. This includes Registration information, N. S. P. E. literature, I. S. P. E. literature, and Engineer-in-training opportunities in the Society.
   b. Encouragement of Engineers-in-Training to join as Junior Members. Their encouragement to take active part in

chapter activities. Their placement on Chapter and State Committees, and their inclusion with a non-voting representative on the Board of Direction.

2. Immediate Action.
   a. State Membership Chairman Will's proposal for direct mail circularization of all registered engineers in the State for the purpose of acquainting these prospective members with the Society, and inviting their affiliation. This plan calls for a series of three letters at set intervals. It was pointed out that this plan was only in the stage of being presented to the Board for action, and that there was still the hindrance of having no State Registration Roster for compilation purposes.
   b. The plan set up for Chapter allotments of $25.00 to each Chapter for the balance of this year, for the purpose of direct membership contacts. This allotment is placed in the hands of each Chapter Membership Chairman to be expended solely for the purpose of entertaining prospective members at dinner meetings of the Chapter. It is felt that this aid will cause more serious efforts to be expended in direct contacts.
   c. The establishment of new chapters is looked to as a means of substantially increasing membership. It will provide several points of stimulation to membership in areas of present Chapter responsibility, where such Chapter influence is remote and therefore weak.

Indiana: Mr. Wilson made a brief statement of Indiana's present situation, and stated that Indiana had only eighty more members to go to meet its quota of 200 new members for this year. Other points brought up by Mr. Wilson were:

1. Indiana circularized 1300 prospective members, and realized 100 new members returns.
2. The Indiana Society has been circularizing qualified engineers through the medium of the Indiana Joint Council, to acquaint these men with the facts and desirability of registering under the Indiana law.
3. No Chapter quotas are set by Indiana.
4. Indiana expects to meet its membership quota by the end of the year.

Michigan: Mr. Courtright gave the membership picture as it exists in Michigan. He said that there were 2800 registered engineers in the State, with approximately 1800 of them located in Detroit. The State offers a workable basis for nine Chapters, of which three are already established, one under process of organization at Jackson, and another being worked up at Ann Arbor.

Michigan feels the need of a stronger State Registration Law, in order to aid in the elimination of abuses in the use of the title of "Engineer"

Kansas: (Mr. Williams of Missouri spoke for Kansas.) Mr. Williams stated that Kansas had very good prospects for new Chapters, and a determined effort was being made to obtain new members. He was unable to state whether Kansas expected to make its quota for the year

Missouri: Mr. Williams' outline of the membership condition in Missouri showed that it has 10 Chapters, 1300 members, of which 1000 are registered. Other points brought up by Mr. Williams were:

1. St. Louis Chapter was organized by many of the most prominent engineers in that area, and is being pushed with increasing success.
2. Two new Chapters are petitioning for Charters. These Chapters are the products of young engineers in their respective areas.
3. The Missouri Society maintains very close and cordial relations with the Missouri Registration Board, and is frequently consulted by the Board on matters of ethics and policy.
4. Missouri is voting on an increase in dues, to gain financial strength for the furtherance of membership efforts and beneficial activities.
5. Missouri is seeking a full-time Executive Secretary to handle State Society details at their office.

Ohio: Mr. Heiberg said that the status of registration in Ohio might be viewed as being in its third stage of development. The first stage of "grandfather" admission was long past, the second stage where experience as well as formal education was suitable as a basis for registration was ending, and that the third stage where all persons must pass a rigid examination was on in full fo Examinations are given through the State, at points of advantage applicants, thus eliminating travel a central location. Other points interest in his report were:

1. All Chapters are kept inform of services and materials av able to them for members work. They are sent packets c taining pamphlets, Society Bo let application blanks, etc. Spe ers are offered them through medium of membership comm tee to aid the State person These Chairmen form a steer committee to aid the State M bership Chairman, and are av able in their areas as speaker
2. Ohio has 27 Chapters.
3. No Circularization of prospec members is attempted on State level. The Chapters are sponsible for this activity.
4. Every registered engineer is fered the privilege of affiliat with the Society. Emphasis constantly placed on the factor affiliation being a "privilege".
5. Mr. Heiberg suggested money used for letters and motional literature by N.S.P and State Societies be utilized more direct contact purposes obtaining new members.
6. Ohio favors low dues and la membership as the best means strengthening its position, financially and professionally.
7. Ohio feels that an N.S.P.E. P lic Relations pamphlet is nee by all State Member Societ The pamphlet should have let from National President other officers interspersed thro it, discussing general topics programs suitable for applica throughout the country. factual material should con suggestions and outlines for m bership campaigns, Society po in relation to public interests, other related subjects.
8. It is felt that nationwide cover in the field of news of engin and their activities is needed. use of radio, with the Society ing as a sponsor for a digni program was suggested.
9. Ohio would like to see a tional Membership List, wh would show the member's na registration number and st and his qualifications.

Wisconsin: Mr. Snead gave outline of the Wisconsin situat Wisconsin has approximately 2 registered engineers, of whom

(*Continued on Page* 18)

Employment Practices Committee Reports on Taft Hartley Law

nce the Taft-Hartley Act was analyzed and discussed in THE ERICAN ENGINEER and the Legis- e Bulletin it has come into full ct and operation (on August 22, ') and numerous questions still e as to its effect upon the engi- ing profession.

Most students of labor legislation agree that only time will answer t of these questions. Meanwhile, believed that a restatement of pertinent provisions of interest to essional employees in non-tech- l language is in order so that we all be fully acquainted with the eral scope and intent of the law.

Most of the current debate has on a national level concerning whether unions shall utilize the ices of the NLRB, (2) sub- sion of the non-communist af- vits for union officials, and (3) nission of financial reports. One eral judge has already ruled that required non-communist affidav- are proper and must be filed be- the services of NLRB can be ined. The Committee does not that this provision is of any icular importance to professional loyees as there would seem to be doubt that professional em- ees forming a labor organization ld willingly certify that the union ials are non-communists.

William F. Ryan, Member

Professional Section Restated

The single most important section of the new law to professional employees is that which states in effect that the NLRB shall not certify a unit of employees as an appropriate unit for the purposes of collective bargaining if the unit contains both professional and non-professional employees, unless the professional

J. S. Kennedy, Chairman

employees by majority vote decide to be represented by the non-professional group. Except for the decision of who is and who is not a professional employee, which is discussed later, there would appear to be little or no question as to the intent and meaning of this provision. The debate in Congress, the committee reports, and the testimony of the engineers joint panel, all indicate that the intention is to finally allow professional employees to speak for themselves in collective bargaining matters and to release them from non-professional domination. It might be well to bear in mind that the wording throughout is to "professional employees," and not to professional engineers. Because we are primarily concerned with the welfare of our own profession and consequently use the word, "engineer," with great frequency it would be easy to slip into the error of presuming that professional engineers may always have their own collective bargaining unit. That is not what the law provides. It is quite possible that the professional units may be composed of engineers, accountants, draftsmen, surveyors, etc., and may even include doctors, lawyers, optometrists, dentists, or any other employee who is classified as a "professional." Of course, the Board may certify a unit composed solely of engineers under appropriate conditions. The new law recognizes that under certain circumstances the professional employees might desire to be represented by an organization which is not restricted to professional employees. This privilege is retained for the professional employees. If this course should be desired it would require merely that a majority of the professional employees so indicate in a formal NLRB election. But the important point of this provision is that hereafter the professional employees cannot be forced to accept representation by a unit which they feel will not adequately represent their best interests and objectives.

Who Is A Professional?

The constant use of the words, "professional employee," must invariably lead to the question, "Who is a professional?" Before the law was adopted, and during its drafting stages, many divergent definitions were suggested to answer this problem. It was obvious that without

Alex Van Praag, Jr., Member

some definition to guide the NLRB they would have free rein to use their own definitions with the result that the professionals might be in no better position than previously existed. There may be some criticism of the definition that was finally adopted on the grounds that it is too loose in its wording and too general to serve as an adequate guide. On the other hand experience may show it to be too rigid in some respects. Only experience with actual cases will decide this point. No one will say that the definition of "professional" used by the Wage-Hour Administration, upon which the Taft-Hartley definition is based, has operated perfectly. But most impartial observers believe it has been generally satisfactory and that the Taft-Hartley definition, as modified from the Wage-Hour wording, will provide the necessary foundation for reasonable decisions. If experience proves this view to be too optimistic our obvious recourse will be to seek the necessary amendment from Congress.

It should be particulary noted that the so-called, "pre--professional," "sub-professional," "junior employee," etc. is covered by the definition. Here again we should note that the definition is not restricted to the "engineer-in-training" but provides coverage for all junior professionals in all professions.

Supervisors Not Covered

Because many engineers serve in supervisory positions it should be made clear that under the new law supervisors are not "employees" entitled to protection under the Act. There has been some confusion on this point because of a provision that states that a supervisor may become or remain a member of a labor organization. However, the important distinction is that the employer is not bound to bargain with or for supervisors if he does not desire to do so. The definition of a supervisor is broad and is bound to cover a number of engineers who may or may not have previously considered themselves in that classification. Only actual cases will more clearly define the present wording, but broadly stated it may be said that an employee who directs other employees and has any substantial degree of disciplinary control over them is likely to be a supervisor under the definition.

Secondary Boycotts and Jurisdictional Strikes

Many engineers, particularly those engaged in the construction industry, have been plagued by secondary boycotts and jurisdictional strikes. The Taft-Hartley Act attempts to prevent these tactics in the future by providing that such acts are hereafter unlawful and making the labor organization responsible for such acts liable for damages in a civil suit. An engineering example frequently cited which may now be illegal is the case of union employees on a construction project striking because the plans were drawn by non-union engineers.

These practices are also condemned as "unfair labor practices" by the Act, which becomes important when it is noted that condemnation places another and stronger weapon in the hands of the Board. That stronger weapon is the right of the Board to obtain injunctive relief against such practice in an appropriate federal court. Once such injunctive relief has been obtained from the court the party restrained is, of course, subject to contempt charges for failure to obey the mandate of the court.

The Closed Shop Issue

Probably no provision has accounted as much for the abuse heaped upon the Act in some quarters as that provision outlawing the closed shop. The simple effect of this provision is that a union cannot require membership for a person to obtain a job in a plant for whose employees it is the bargaining agent. However, the closed shop principle has not been as hard hit as would first appear. This is by reason of the allowance for "union shops" under certain conditions. Briefly stated, this provision permits the employer and labor organization to agree that all employees in an appropriate unit must become members of the bargaining unit within thirty days after employment begins, provided that a majority of the employees eligible to vote have authorized the making of a union shop agreement in a NLRB-supervised election. Thus, an employee, including a professional, could be required to become a union member. It should be borne in mind, however, that if the professionals exercise their right of having a unit restricted to professional employees they need not fear this provision so long as a majority of the professionals in that unit do not desire it.

Somewhat related to this question is that of individual relations between employer and employee. This has been a particulary difficult matter since the right of individual relations is out of line with the theory of collective bargaining through mass, rather than individual, action. However, the new Act attempts to c promise the point by providing individual employees or groups employees may have the right present grievances to their emplo and have the grievances adju without the intervention of the lective bargaining representative, long as the individual agreement not in conflict with a collective gaining contract then in force the union representative has b given an opportunity to be pres at the adjustment conference. word, "grievance," is not defined the Act and some question arise as to just how far this may low the parties to go. It would pear to the Commitee that the of common sense restricts the w to its natural meaning of, "compla annoyance, suffering, grief," Some attempts may be made to large the meaning to include the ri of an individual employee to dema the right to bargain with the ployer. Such is obviously not intent and the Committee feel attempts to use the provision in way are bound to fail.

Effects on Construction Industr

There is a possibility that large and important construction dustry, employing many enginee may be brought within the Act af being generally not covered by original Wagner Act. Repeated mors have been disseminated to effect that the new Board is givi serious consideration to bringing large portion of the construction dustry under its jurisdiction.

The reason for the past exempti to a large extent was the simple fa that the original Wagner Act was stricted, as was constitutiona necessary, to cases involving inte state commerce. It has always be felt in authoritative quarters that construction industry was primar engaged in intra-state commerce, a therefore without the scope of Act. This same restriction is just true under the Taft-Hartley Act, b the difference may be in the inte pretation. Whether the NLRB w or will not take jurisdiction over construction industry is in real not an accurate summation of question, because the NLRB do not take jurisdiction by industr Rather it must of necessity tak jurisdiction of particular individu employers and employees, decidi each such case separately, though is acknowledged that patterns ge erally emerge in particular industri

(*Continued on Page* 18)

Amendments to Registration Laws Show Work of Professional Groups

The past year or so has been one the most important in the history d progress of engineer registration ws. A survey conducted by NSPE scloses that several states have opted changes, ranging from minor odification to clarify obscure points the law to completely new regis-ation statutes.

The year, 1947, deserves a special ace in the history book of registra-on for it witnessed the completion of registration law in each of the 48 ates of the Union—Montana join-g the fold to become the 48th ate. The only area of the United ates not covered by some form of gistration law for engineers is the apital of the Nation—Washington, C.. But this omission promises to shortly corrected according to re-rts from the District of Columbia ociety of Professional Engineers no now have a proposed law in the nds of the District of Columbia ommissioners.

No attempt is made in this report list the changes which have taken ace in their order of importance. he data obtained was on the basis answers to our inquiries from a sponsible source in each State who familiar with the local registration v and its administration. The fol-ving information is listed alpha-ically by States for which informa-n is available at this time.

California: The Governor has ned an Act of the Legislature ich broadly revises the engineering gistration law of the state, which l heretofore been restricted to il and structural engineers. The v law (CH. 1469, Calif. Stat. 47) provides registration in the nches of chemical, electrical, chanical, and petroleum engineer-, in addition to the civil engineer-and structural engineering clas-cations previously existing.

The administration of the law is ted in a State Board of Regis-tion for Civil and Professional gineers, which has been enlarged m three to seven members. The sent three Board members are re-ed in office and new appointments prescribed for the four additional nches covered, with one represent-e from each branch. Registra-n is not required for employees in the communication industry; nor to employees of contractors while engaged on work on communication equipment; but it is provided that such employees may register if they so elect.

A "professional engineer" is defined as "a person engaged in professional practice of rendering service or creative work requiring education, training and experience in engineering sciences, and the application of special knowledge of the mathematical, physical and engineering sciences in such professional or creative work as consulation, investigation, evaluation, planning or design of public or private utilities, structures, machines, processes, circuits, buildings, equipment or projects, and supervision of construction for the purpose of securing compliance, with specifications and design for any such works." Those securing registration may use the title, "professional engineer," and the appropriate title in the branch in which they are registered, i. e., "electrical engineer," etc. Persons already registered as civil engineers may use the title, "professional engineer," without additional application or fee.

Qualifications for registration include six years or more of experience in engineering work satisfactory to the board and passing a written examination, except for those qualifying under the "grandfather" clause which extends to June 30, 1948, in which case the examination is waived. Graduation from an engineering school approved by the board is considered as equivalent to four years of required experience, but if the applicant has not graduated, each year of schooling is counted as only one-half year of experience. Graduation in a curriculum other than engineering is considered as two years of experience, and no applicant shall receive credit for more than four years of experience because of undergraduate educational qualifications. Postgraduate work may be given credit not in excess of one year; engineering teaching may be considered as experience; and engineering experience in the armed forces may be given equal credit with any other comparable engineering experience.

Provision is made for an "engineer-in-training" classification after four years of engineering experience. There is also provided a "grandfather" clause for engineers-in-training, which also extends to June 30, 1948. Under this provision an applicant may be certified as an engineer-in-training without examination.

Colorado: No particular changes have been made in the Colorado law and no specific changes are contemplated. However, a Committee of the Colorado Engineering Council is scheduled to review the entire picture of registration late this year to determine if changes are desirable and, if so, what recommendations should be made.

Idaho: The Idaho law attracted wide interest in the latter part of 1946 when the Attorney General of that State ruled that it forbids the practice of engineering by a corporation. Although no amendments have been adopted since the passage of the law in 1939 it is expected that the next Legislature will be asked to extend the law to include mining engineers, presently exempted. The Idaho State Board of Engineering Examiners reports that its policy of settling as many problems outside of the courts as possible has been quite successful. However, it may be necessary to seek court action in the near future in connection with license revocation.

Illinois: During the 1947 session of the Illinois Legislature the "Grandfather Clause" was extended in the case of men who were in the armed services at the time the law went into effect. Such engineers now have until thirty months after discharge from the service to apply for registration without examination. By interpretation of the examiners, the engineer-in-training examination is to be given for recent college graduates beginning this year. The law does not specifically call for a separate examination, but it has been interpreted that the first half of the examination can be given immediately after graduation and the second half withheld until the applicant has obtained the required experience. Written examinations are now being given to all candidates for

registration, except those of outstanding record whose verified experience records show at least fifteen years of practice of the full professional grade. Reciprocity to engineers registered in other States is also being given on the same basis. Thus, an applicant from another State is not granted a license in Illinois unless he was examined in his home State or meets the fifteen year experience requirement.

Indiana: The past session of the Indiana General Assembly amended and revised the Indiana law to clarify the wording of some provisions of the Act and more particularly to provide for certification of engineers-in-training. The law now permits an applicant to take the examination in two stages; the first stage to be taken after completion of a minimum of four years of engineering education or four years of active practice. Passage of the first stage of the examination entitles the applicant to an engineer-in-training certificate.

Kansas: This State made real progress in its registration history this year when it repealed the optional registration law and substituted a law providing for mandatory registration. The new Kansas statute is patterned after the model law. Reciprocity with other states is established and the usual "grandfather" clause permits engineers now practicing to qualify for license without examination. Architects, but not architectural engineers, are exempted from the Act. Other exclusions include draftsmen, stationary engineers, safety engineers, and those engaged in design and erection of structures for personal use, including the design of products for resale.

Kentucky: Advices from the "Blue Grass" State indicate that the Registration Board's changes adopted this summer in regard to classifications have been well received. Originally a number of limited registrations, such as Mining Engineer-Coal, Civil Engineer-Highway, were granted. Under the new classification, registration may be obtained in the branches of Architectural, Ceramic, Mechanical, Civil, Electrical, Fire Protection, Industrial, Metallurgical, Mining, Petroleum, Landscaping, Aeronautical, and Sanitary Engineering. The Kentucky State Board has recently entered into a reciprocal agreement with the Missouri State Board whereby an engineer registered under either the graduation and 4 year satisfactory experience clause or the examination and 8 year satisfactory experience clause may file application with the reciprocal state, accompanied by a certificate from the State Board with whom he is registered, the certificate to be signed by the Chairman and Secretary of the Board, and immediately without delay the Board to whom application is made may issue a like registration. This arrangement will eliminate the delays frequently encountered in waiting for regular meetings of the State Board.

Maryland: After seven years of experience under the original registration law the "Free State" of Maryland concluded that a new law should be adopted if registration was to be effective and enforceable. Consequently the Legislature this year enacted extensive amendments to the old law. The revised law eliminates many of the shortcomings of the original Act. The various definitions have been extended and clarified. Recognition is given to the engineer-in-training status by allowing graduates to take an examination in basic engineering subjects. The practice of engineering is specifically and clearly defined, and the qualifications needed by a person to legally represent himself to be an engineer are clearly set forth. There is now under consideration the formation of a committee to enforce the provisions of the new law.

Missouri: Two important changes have been made in the Missouri law by action of the General Assembly. The first repealed and re-enacted the section relating to the non-transferability of registration certificates, declaring the rights and privileges conferred by registration to be personal and prohibiting practice by corporations and partnerships. This amended section now permits practice through the mediums of a corporation and through partnerships under the following conditions: (1) All plans, specifications and documents requiring identification by a personal seal of a professional engineer must be prepared by or under the direction of a registered professional engineer in good standing; (2) Both the corporation, and professional engineer, or engineers, acting therefor, shall be responsible for professional engineering services rendered through the corporation. A professional engineer acting for the corporation shall be held to account both professionally and personally for the nature and character of the work prepared under his direction, although bearing the personal seal of another professional engineer. It is felt that the new section will safeguard the public interest to a greater extent than the former provision, in regard to co porate practice.

The other new section commits t State to an entirely different theo of exchange of registration on a r ciprocal basis. As originally passe the section authorized exchange registration on the basis of equality requirements for registration, as e pressed in the statute, without r gard to the actual qualifications the applicant. The new section a thorizes agreements between the Mi souri Board, and other State Boar for reciprocal registration, based u on the qualifications of the individu applicant, when such qualifications a not lower than those prescribed by t Missouri law. Thus, under the o provision the best qualified engine from any State might be barred fro reciprocal registration in Missou on the ground of the inequality of t statutes. However, the new sectio grants reciprocal registration on t certificate of other State Boar showing that the applicant possess qualifications for practicing profe sional engineering equal to those r quired by the Missouri statute.

The Missouri Board has also r cently clarified the section relatin to the scope of examinations, fo lowing closely the language of t Kentucky Act in this respect. Unde the new regulation registration wi be granted in the following branche and divisions of such branches: Civ (structural, highway, public healt and sanitation); Mechanical (hea ing, ventilating and air conditioning power; aeronautical; machine de sign); Electrical (power, commun cations, illumination); Mining (me allurgical, ceramic, petroleum, geo logical); Chemical, Agricultural, an Industrial (last three all inclusive)

Montana: As pointed out at th start of this report, Montana thi year became the 48th State to ado a registration law. The Montana law however, is confined to the registra tion of civil engineers and land sur veyors. The new statute takes ef fect on the first day of 1948. A sec tion is provided for certification a an engineer-in-training, based upo graduation from an approved scho or four years of satisfactory exper ence, and passage of an axaminatio in fundamental engineering. A "grandfather" clause allows one yea after the effective date of the Act fo registration without examination fo those who have been residents of th State for at least one year and prac ticing civil engineering (or land sur veying) at the time the Act becam

(*Continued on Page* 14)

Engineers vs. Politics —
Education Offers One Answer

gineers have had much to do with moulding the type of world in ich we live today—but they have relatively little say in controlling the rces which they have created. The problem is recognized by many. low, the author proposes one method of overcoming this unfortunate uation. While neither NSPE nor the AMERICAN ENGINEER *cessarily agrees with the author's proposal, they do believe it to be ought provoking and worthy of publication.*

By H. W. STRALEY, III

Today, as never before in the his-y of North America, there is a ed for clear, objective thinking in tional and international affairs. is need arises from the com-exities of civilization, most of them mming from scientific research d engineering application. They lminated in 1945, in the develop-nt of a totally new and terrifying apon of destruction. Man must, long last, learn to control his pas-n for conquest or face annihilation the final step in warfare.

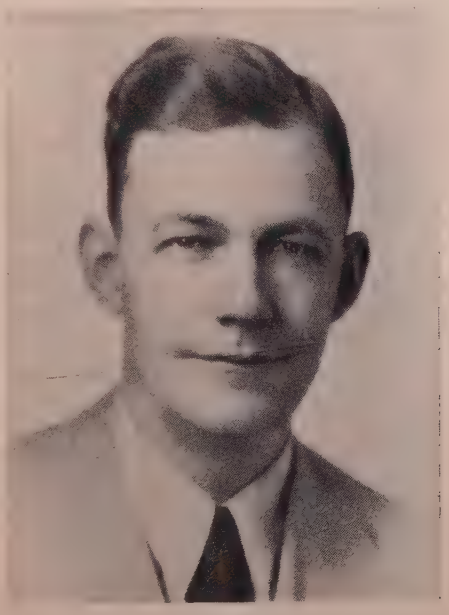
Abundant Life

Who, better than the creators of s civilization, can hope to mold it o one of abundant life rather than ey death? They are fully aware of e forces for both good and evil t they have let loose upon the rth. They are capable of clearly d objectively viewing the creature their partnership and may hope to rce it under the yoke of reason in furtherance of man's well being. Why do they, and we, hesitate? e they heedless of the danger or engrossed in their laboratories d plants to give it thought? Are ey fearful of ridicule, if they enter e political arena? Are we, on the ner hand, afraid to give them reign cause we fail to comprehend their ethods or their language?

Mankind at the Crossroads

The military experiments at Bikini ere styled "Operation Crossroads" om their geographical site. The me might well have had greater nificance, for civilization, itself, nds at a parting of the ways. head, in one direction lies a vista abundance and plenty, of greater ergy to drive the wheels of prog-ss; of greater leisure in which to joy the fruits of endeavor. In the ner, one sees the black abyss of aos. The time is now. The deci-n cannot be delayed.

This dilemma is but the culmination of the scientific and engineering advances of the last century and a half. Prior to this age, man lived in a steady state with reference to the rate of doing work. In all previous millenia, he could push forward his endeavors at an accelerated pace only by adding mere workmen or beasts of burden. Both involve the use of energy derived from food consumed—from the organic world,



H. W. Straley, III
International Bank Official

vegetal in the final analysis, for the carnivore feeds upon his herbivous neighbor.

In 1774, James Watt, quite without appreciating his achievement, upset the old order and ushered in the high-energy-consumption civilization toward which all the world is striving today. From his beginning, came an endless line of new devices all utilizing inorganic forms of energy—coal, oil, water, and finally, the atom itself. Michael Faraday's reply to Gladstone's query, "Of what use is the dynamo, Mr. Faraday?", has the ring of true prophesy. Today, the state would find itself at a loss for revenue could it not use the taxing power on electrical and similar devices.

At the beginning of the last century, North Americans used energy at the rate of about 4,000 or 5,000 kilogram calories per capita per day. Today, the staggering amount of 150,000 is available to each inhabitant of the continent. The rate of doing work has multiplied so greatly that man is no longer dependant upon his own labor or that of his beasts to perform the tasks needed to propel his machinery.

For any geographical unit to achieve greatness in the 20th century, there are three requisites—prodigious sources of extraneous energy to propel machines, iron from which to make them, and engineers to accomplish their design. Other substances are useful; other skills are desirable. But, their importance pales into insignificance beside these three.

To manage a civilization of this kind, one must know how it works. In addition to the time-honored precedents and tradition of the law, one must add clear-headed thinking about the newest applications and their implication to man and his multitudinous relationships, called society. Never before has so much been demanded of leadership.

Who Can Furnish It?

In this age of applied science, where can the leaders be found and what must they know? Will a knowledge of legal precedent and economic history suffice to point the way to an abundant life? Alas, it will not. The leaders of today must know, above all else, what makes the social wheels go round. They must be able to grasp quickly the implications of each new invention as it springs like Minerva, full grown from the brain of some modern Jove. They must see unerringly what change may be wrought by science in its everlasting quest for truth. They must be ready and willing to part company with the past in designing a new America that can and will assume its position of leadership in world affairs.

No one can forsee what the progeny of the marriage of science and

engineering will be so well as those that have created in the laboratory and designed at the drafting table. No one can be so ready to accept change and mold it to human needs as the originators of change.

The problem of the future is peculiarly their own and they must be entrusted with it. Instead of having an occasional scientist bear witness before a legislative committee, one should be in the chair at the hearings. Instead of appointing a few administrative engineers to oversee the activities of their fellows, they should sit as cabinet advisors to the highest executive.

Where Are They?

These men are honest; they are able. How is it, then, that so few of them serve? Few, indeed, are the legislators, either state or national, that were drawn from the laboratory or the designing room. One can find only a sprinkling of them in high administrative office, and only one has aspired to national leadership.

In 1942, Clement C. Williams, the president of Lehigh University,* wrote that a colleague had been called into consultation at the state penal institution. He could find no inmate trained in engineering or science to act as assistant, but found "lawyers, bankers, teachers, preachers, and other representatives of humanistic callings were available aplenty." Mr. Williams then made an independent investigation of penetentiaries in neighboring States with the same result.

In lecturing, during the last decade or more, on the impact of engineering and science on the economic, political, and social structure, I found bankers, economists, and others trained in the social and humanistic studies, far more reluctant to face the fact of change or to listen to proposed solutions than engineers, scientists, or skilled or unskilled laborers.

There are numerous reasons why those trained in science and engineering hesitate to present themselves for public office. Space limits consideration to what appear to be three of the most significant.

Three Reasons

In the first place, those engaged in the political arena must be adept at compromise. Both engineer and scientist are untrained in the kind of thinking that leads to compromise. Their daily activities are in a field where facts of a physical nature must be faced squarely and conclusions cannot be sidestepped or ultimate decisions postponed to a politically more propitious time.

Secondly, engineers and scientists fear the ridicule of their fellows if they enter politics. This fear, and the actual loss of caste that often accompanies such action, must be overcome in the future if the nation is to benefit from their active participation in legislative bodies.

A third consideration is the lack of acquaintance of their possible constituents with the work of engineers and scientists (particularly, the latter), and a consequent fear of placing control in their hands. The language of the scientist is not the language of the people who fear that which they do not comprehend. The scientist has been depicted as totally unmoved by human considerations and, therefore, is not to be trusted by the human masses. This state of affairs can be corrected by a greater number of well written popular books and a more simplified presentation of engineering and science in our schools and liberal arts colleges.

The Solution

How may this situation be remedied?

"The only conclusion I am now prepared to draw from these observations is that the scientists and engineers, through a process of education in which I hope to participate, should be induced to play their rightful part as leaders of public opinion and as functional director of the course of public progress especially as this is affected by scientif advancement." *

This altered educational progra must have two distinct approaches i it is to be successful.

In the first place, all of those pass ing through American schools mus learn something of science and en gineering and the place that the occupy in the modern world. Fro the earliest years to the period o specialization, they should be expose to a graded series of studies de signed to familiarize them with sci entific fact, engineering applicatio and social implication. All need no be made scientists or engineers; fe will be. But all should know the basi principles, the most significant ap plications, and what their impact ha been on man's way of life.

Secondly, those few that specializ should never be permitted to los sight of the effect of their tamper ings and their responsibilities a citizens. This does not imply the in troduction of new courses, but th rewriting of existing ones. No op portunity should be passed to stres the intimate association between th laboratory and the governmenta bureau. All should be encouraged t take a part in building the nation an of serving, as did Isaac Newton, i the legislative hall.

* The Civic Morals of Science, *Jour. Eng. Ed.*, vol. XXXII, No. 7, March, 1942, pp. 505-506.

* Richard R. Price, Executive Secretary Minnesota Association of Professional En gineers, in a letter to the writer, May 2 1946.

Amendments to Registration Laws

(*Continued from Page* 12)

effective. A reciprocity clause permits registration for applicants holding a certificate from NCSBEE or the National Bureau of Engineering Registration, or registration in any other State, Territory, or Possession, provided the applicant's qualifications meet the requirements of the Montana Act.

Ohio: The most significant change in the Ohio law has been the initiation of an engineer-in-training program, with the usual provision allowing the applicant to take the examination in two stages. The OSPE has been exceptionally active in fighting the unauthorized practice of engineering in that State. To date they have obtained one consent decree and two injunction suits are now pending in the courts. It is anticipated that this activity will be vigorously continued. Advertising of unlicensed engineers in the telephone directories is being attacked by the Society.

Washington: The Governor o Washington recently signed a new registration law for the State which in general, covers the practice of en gineering and land surveying. Th former statute governed the practic of civil, electrical, mechanical, struc tural, and hydraulic engineering an land surveying. The new Act cover mining engineers, who were not cov ered in the old law. Graduates of en gineering schools, under the new Ac may take the theoretical part o their examinations immediately afte graduation, thus providing for en gineers-in-training. Only an oral ex amination will be required after the have completed the necessary practi cal experience for full registration.

As additional information is re ceived a second part of this surve will be published in a subsequent is sue of the AMERICAN ENGINEER.

Legislative Committee's Monthly Report

ear Fellow Member:

One of the standing problems of e Legislative Committee will always e ways and means of improving our rocedures and policies in order to lfill our duties in the most efficient anner. With this in mind it has een determined that it will be most eneficial for the Legislative Comittee and NSPE generally to discuss e adoption of a statement of policy guide our efforts in 1948.

Our aim is to make this legislative olicy *your* policy and for this reason opies of a first draft have been sent the Chairman of each State Legistive Committee. We expect and ope that this tentative policy will be iscussed, studied, and revised in the ght of the comments received.

Presented below are some of the ecific topics with which the policy ay be concerned, together with a rief statement of the present status nd purposes of the legislation. It urged that you notify your State egislative Chairman of your views n these specific topics in order that e may transmit those views to us. lore detailed reports on these items ill be found in past issues of the egislative Bulletins, which should e available to you at the office of our Chapter Secretary..

National Science Foundation: his legislation, which was pocketetoed by the President, after approval by both Houses of Congress, ould establish a Federal organizaon to promote basic research. One ivision would promote engineering search, with the advice of a divisnal committee of five members. he Foundation would be authorized enter into contracts for basic rearch, grant scholarships, foster the terchange of scientific information, d correlate the Foundation's work ith private groups. The President's approval was based primarily on e administrative organization, which sted authority in a part-time board 24 members. The President favs the legislation but wants adminrative control subject to the Execive machinery.

Universal Military Training: This a "hot potato" which is expected to a leading issue in the next session Congress. The legislation is of terest to professional engineers dictly insofar as the alternate educational provisions are concerned. Some plans would allow various amounts of credit for education in lieu of direct military training and our interest is related to engineering education in this respect.

St. Lawrence Seaway: A Senate Committee has approved this project and it is expected to come up for debate on the Senate floor at the next session. The present resolution calls for the project to be self-supporting and self-liquidating. The Seaway would be a 27-foot navigation channel connecting the Atlantic Ocean with all the Great Lakes. Accompanying facilities would generate electricity up to 2,200,000 horsepower.

Valley Authorities: A number of bills are still pending in Committee which call for the creation of valley authorities, patterned after TVA. The legislation most likely to receive attention is for the Missouri Valley Authority. However, other valleys for which legislation is pending are the Savannah, Merrimack, and Columbia. The basic conflict in this legislation is the universal desire for integrated flood control procedure vs. the private or public utilization of the valuable by-products, i. e., electric power, irrigation, etc.

Advance Planning: Neither branch of Congress has approved an extension of the advance planning program, which operated during the war. Pending bills authorize up to $50,000,000 per year for financing the cost of engineering, architectural, and economic investigations and studies, surveys, designs, plans, working drawings, specifications, procedures and other action preliminary to the construction of public works. The program would be administered through the Federal Works Agency.

RAY M. FULLER

Airport Development and Hospital Construction: These projects have already been approved and are on the statute books. However, they are both of importance in that they involve engineering considerations and are long-term programs. Their legislative importance will be noted primarily in the amount of money Congress appropriates to finance the projects and any limitations which might be attached to the appropriations.

Stream Pollution: The Senate has already approved a bill designed to aid in the control of stream pollution and action may be expected in the House next year. The legislation authorizes loans up to $100,000,000 per year for pollution control work and up to $12,000,000 per year for advances for engineering, architectural, and economic studies. The program would be administered through the Federal Works Agency and the Federal Security Agency with the cooperation of the appropriate State agencies.

Federal Engineering Aid to Foreign Nations: After passing the House of Representatives this legislation was left pending for Senate consideration next year. The bill allows the Federaal Government to perform certain technical services for foreign governments with definite restrictions and conditions against the construction or supervision of public works. It is stated in the bill that the services rendered by the U. S. Government are intended to demonstrate the technical accomplishments of the United States, such services being of an advisory, investigative, or instructional nature, or a demonstration of a technical process.

Dissemination of Technological Information: Also awaiting action is this bill to establish a federal clearinghouse for engineering and other technical information. The agency would be established within one of the present departments and would be authorized to collect and classify scientific, technical, and engineering information, making such information available to industry and the general public. The legislation proposes that the service pay its own way through collection of fees from those obtaining the information assembled.

Cordially yours,

Ray M. Fuller

Fire Prevention Progress Reported by NSPE Groups and President's Conference

(*Continued from Page* 4)

expected to solicit the help of the profession in dealing with the problem.

Fire Prevention Education: This Committee reports:

"The nation's fire-loss experience has shown that men responsible for the design, construction and operation of buildings and those concerned with govermental functions are not sufficiently familiar with recommended fire-protection standards. The recent war accentuated the need for continuity of production and the importance of protecting strategic materials. The same principles are applicable in time of peace to avoid loss of life and to conserve the nation's resources.

"It is recognized that some colleges now have programs, such as vocational training in fire fighting. The Illinois Institute of Technology has a full 4-year course leading to the degree of Bachelor of Science in Fire-Protection Engineering. However, the intent of this report is to present a plan to enrich the knowledge of all engineering and architectural graduates so that they will be aware of existing standards and apply them when necessary; it is not the intent, in this report, to cover courses for the education of fire-protection engineers or courses of vocational types.

'The public is entitled to tangible evidence of a more realistic approach than periodic admonitions to "be careful." Important as the latter may be in many cases, such admonitions are likely to result in an apathetic attitude on the part of the public, unless there is positive evidence that safe-practice standards are followed in the design, construction, and operation of facilities. Given a safe building and a safe operation, enforcement agencies will be in a much stronger position to ask and obtain public cooperation.

"Numerous examples might be cited to illustrate the points brought out in the foregoing paragraphs, but the hotel fires in Chicago and Atlanta, and the night-club fire in Boston, have resulted in a demand for more adequate safety.

"The recommendations in this report include a long-range program of education for engineers, architects, and others, which may be expected to result not only in safer structures, but also in a professional group that may be expected to contribute to future building-code revisions and improved standards.

"Amplification of Engineering Textbooks and Bulletins.—The objectives sought in this report can be attained only when available texts are amplified to include pertinent information on fire protection, such as texts on hydraulics, building materials and design, industrial chemistry, electrical, aeronautical and agricultural engineering, and business administration.

"The Program.—While no complete educational course, program, or action procedure can be devised in this report that will be applicable in every respect to every school and community, there are in almost every case certain fundamental factors to be considered. Some of these are outlined as follows:

"1. Economic Consideration of Losses.

"2. Public Interest.

"3. Relations of Architects, Engineers, Management and Regulatory Authorities to Owners and the Public.

(a) Planning and Engineering.
(b) Fire-Protection Organizations.

"4. Principles of Loss Prevention.

(a) General Considerations.
(b) Construction.
(c) Building Equipment and Appurtenances.
(d) Special Considerations.
(e) Management.

"5. Fire Protection.

"6. Fire Hazards During Construction.

"7. The Fire Problem Other Than in Buildings.

We recommend:

"1. That existing courses for engineering and architectural students include fundamentals of fire protection where applicable.

"2. That as an alternate plan, suitable for some institutions of learning, a 32-hour course covering the management aspects of fire-loss prevention be given to those enrolled in classes in engineering and business administration. Experience with such a course indicates that it can be interesting and effective.

"3. That engineering, architectural, and economics textbooks be amplified as soon as practicable to include fire-protection subjects.

"4. That where applicable in existing courses, fire-protection codes and accepted practices be used as supplementary texts."

At another point this report states:

"The Subcommittee on Engineering and Architectural Schools has suggested that colleges and universities call upon committees of engineers and architects qualified in fire-protection engineering for liaison or consulting purposes. Such committees should maintain liaison with groups interested in fire protection, textbook authors, and publishing houses; and should review texts for publishers for fire-protection engineering content.

"The committees might be used to interest and inform faculty members in matters of fire protection by regional seminars, by distribution of informative material, and also by giving occasional lectures at colleges and universities, particularly in the formative stages, in developing more adequate instruction.

"To be most effective, the committees should include a civil, mechanical, electrical, chemical, and an aeronautical engineer, and an architect, all working under competent leadership. Each of the engineers and the architect should be competent not only in his profession but also in fire-protection engineering."

Fire Fighting Services: The committee on Fire Fighting Services also recognizes the importance of engineering in meeting the problem. It states:

"Fire Insurance and Municipal Fire Protection.—Through State and regional rating bureaus, the National Board of Fire Underwriters, or other organizations, insurance companies maintain an engineering service that is available for advice on improving a municipality's fire defenses. These insurance engineering services have effectively encouraged cities to maintain strong, reliable water supplies and have promoted good fire departments and other features of municipal fire defenses. They grade municipal fire defenses, including fire departments, according to the Standard Grading Schedule of the National Board of Fire Underwriters. This rating affects fire-insurance rates in most parts of the country, and provides an incentive to the city to improve its major items of defense. Fire-prevention work by fire departments may, under the grading schedule, affect the grading relatively little."

The Fire Fighting Services Committee also makes recommendations concerning water supply which will

ropably result in improvement of many municipal facilities. This of ourse, will involve a great deal of ngineering work. The report states:

"*Water Supply.*—Most cities pro-ide water for fire-protection pur-oses from their domestic water dis-ribution system. A few of the lar-er cities also have installed a high-ressure system for fire protection to ongested, high-value areas only, vith a separate system of mains and umps.

"Domestic water distribution sys-ems should provide quantities of vater for fire protection in addition o that supplied for domestic con-umption. The amount of water ecessary for fire flow depends upon he height, area, type of construction nd occupancy, congestion and haz-rds of the buildings in a particular ection, and its determination is argely a matter of judgment and ex-erience. The grading schedule of he National Board sets up a basis or determining the fire flow neces-ary in high-value districts of cities f various populations.

"When a municipality has no do-nestic water supply system, it must epend on pumpers taking suction rom any available water, such as ivers, ponds, and wells. The mu-icipality should make a study of uch available sources of water, and rovide roads and other facilities for umpers to reach and pump from uch sources without becoming nired. Sometimes even a small rook can be dammed to provide a ool, or to flow into an open con-rete tank, from which pumpers may raft.

"During the war, many water-sys-em improvements were deferred, nd for some time water utilities will e busy catching up with extensions nd also major improvements.

"A plan frequently followed at in-ustrial plants is to store quantities f water close to the buildings to be rotected. The idea is that, in case f fire, the water will be right there eady for use. Such storages are for ire-fighting purposes only and thus re independent of the public water upply. The plan came into use be-ause of the unreliability of the pub-ic supply.

"War experience demonstrated the eed of local storage of water for ire fighting. In England and Ger-nany, ground storage tanks or reser? oirs were provided in each block in city. Fire-fighting water was taken rom these storage tanks by fire-de-artment pumpers.

"Technical bodies should review the traditional principles of water supply design in the light of war experience."

Industrial Research: The Committee on Research has listed a number of problems most of which will require engineering work if they are to be solved. They are:

"Comparative classification of fire hazard characteristics and properties of materials for building construction.

"Contributions to the rapidity of fire spreading and to the toxic hazard of burning coatings and other interior trim and finishes, and of decorative materials, including furnishings of places of public assembly.

"Determination and classification of the fire hazards of wearing apparel and costume accessories.

"Fire and explosion hazard performances of chemical heat-transfer media while in use or standing by.

"Storage and handling of hazardous chemicals in bulk form, during and after handling, or while in use.

"Relative dangers or hazards to fire fighters and the public when hazardous materials are burning.

"Explosion prevention and emergency safeguards when flammable liquids, gases, and combustible solids are stored, handled, or processed.

"Reclassification and color coding of flammable liquid containers for extraordinary environmental conditions, such as high altitude flying cargoes, high oven temperatures, catalytic influences on ignition temperatures.

"Compilation of trade-name materials of commerce, with tabulations of their respective fire and safety-hazard properties; identification by package labeling of such characteristics is desirable.

"Development of procedures for inspection, counterchecking of automatic instrumentation for safety controls, periodic service tests, and similar factors in maintenance of safety measures.

"Development of damage control methods when safeguarding is bypassed by unusual happenings.

"The occurrence of spontaneous ignition—causes and inhibitors.

"The control and elimination of static electricity.

"The control and elimination of corrosion and its impairment of materials and devices.

"The significance of mechanical factors, vibration pressure, friction rupture, etc., with respect to the fire hazard."

Building Construction, Operation, and Protection: This report deals almost 100 percent with engineering problems. It is too long to reproduce here in its entirety. Those who are interested may obtain copies by writing to the President's Conference on Fire Prevention, Federal Works Agency Building, Washington 25 D. C.

In connection with construction, the report discusses building design and planning, barriers to the spread of fire, concealed spaces, exitways, installation of fire-extinguishing equipment, occupancy and use consideration, and fire zoning and exposure. In discussing building codes it deals with the following topics: municipal codes, modernization of codes, uniformity, enformement, and in dealing with deficiencies in codes it deals with their relative importance, their major deficiencies, and methods of correction.

Laws and Law Enforcement: The Committee on Laws and Enforcement is concerned chiefly with building codes and building standards. Its report is a lengthy and detailed discussion of the problems involved in formulating building codes at municipal levels.

It is pointed out that many small cities and communities do not have building codes because of the heavy expense involved in publishing them and also because they do not have available the *necessary technical persons who are competent to draw such a code.*

This report is also too long to reproduce in its entirety, but those who are interested may obtain a copy by writing to the President's Committee.

Thus, the battle against fire goes on. Some accomplishments have been realized, but there is much more work to be done. It is chiefly a job for engineers, according to indications of the President's Committee reports. And engineers must remember that it is a continuing job. It will not end.

NCSBEE Meeting

The National Council of State Boards of Engineering Examiners has announced that plans are complete for its Twenty-Sixth Annual Meeting which will be held at the Hotel Pennsylvania in New York City, October 27, 28 and 29.

The Registration Desk will be open at 9:00 A. M. Monday, October 27, on the 18th floor of the hotel.

Employment Practices Committee Reports on Taft Hartley Law

(*Continued from Page* 10)

based on a number of the individual cases. If jurisdiction is extended more generally to the construction industry the basis will probably be that the industry affects interstate commerce, even though it may not be engaged directly in interstate commerce. This distinction without a difference has been upheld by the courts as sufficient to warrant federal regulation.

There is some degree of hesitation on the part of NLRB officials to become involved in construction industry problems, and understandably so when some of those problems are considered. For instance, one of the problems cited is that while it may take months to put up a structure certain crafts may work on it for only a relatively short time. By the time the NLRB got around to deciding questions affecting that operation and the employees performing it the work might be completed and the issues dead ones. By that time the particular employees would be working for another employer on another job, and so on, ad infinitum. Also causing understandable hesitation is the knowledge that the construction industry is particulary beset by jurisdictional disputes and complicated arrangements of a local nature are often in effect to govern such matters. NLRB's slow-moving machinery might be sorely taxed to untangle some of these complications. To mention one other vexing problem in this discussion—in order for the construction industry unions to maintain their traditional union shops an election would have to be held under Board supervision. What appears to be a relatively simple question of when the election should be held becomes highly complicated in the construction industry because of the seasonal nature of the work and the great fluctuations in the numbers and types of workers from day to day. These are some of the complications which indicate that should the Board assume more jurisdiction it will be a slow and gradual process while these questions are being ironed out.

In Summation

This Committee report has not attempted to answer all of the questions that have been and will be asked about the Taft-Hartley Act and the professional engineer. There are more questions than there are answers at the present time. It has attempted a general discussion in the hope that some points of the new law of most interest will be clarified. Those who are interested in studying the Act in more detail are referred to past issues of the Legislative Bulletin and a discussion of what the profession obtained in the law, as contrasted with what was asked for, by Ray M. Fuller, Chairman of the Legislative Committee, in the July issue of the American Engineer. The Washington Office has a limited number of copies of the Taft-Hartley Act available for free distribution and those desiring a copy should communicate with the Washington Office.

LAUNCH FALL MEMBERSHIP DRIVE

(*Continued from Page* 8)

are not permanent residents. The Wisconsin Society has 700 members with 300 of them located in Milwaukee. There are five Chapters in the State. Other points of his report were:

1. A Joint Board of Architects and Engineers publish an annual roster of members.
2. The State Office of the Society sends out a return postage paid card, with requests for the Society to send an application blank to the addressee.
3. A letter from the State President has been sent to all registered engineers, along with an velope, inviting the non-member to affiliate with the Society. This letter was sent late in July, and no knowledge of the results was available.
4. The Milwaukee Chapter compiled a list of non-member engineers in its area, by Companies of employment. Members in each company were appointed to a committee to contact these prospects and personally invite them to affiliate.
5. Wisconsin favors the formulation of a reciprocity standard by N.S.P.E. between all States, for the purpose of transferring memberships between States. Illinois stated its policy of admitting such members, whose States had reciprocal agreements with Illinois in the matter of Registration transfers.

CORRECTION

Articles were carried in the August and September issues of The AMERICAN ENGINEER about the Andrew Frazer report, entitled, "The Engineering Profession in Transition." This report was prepared by Mr. Frazer under the direction and auspices of a subcommittee of the EJC Committee on the Economic Status of the Engineer. This subgroup is the EJC Committee on the 1946 Survey of the Engineering Profession. Societies represented on both of these Committees are: (1) American Society of Civil Engineers, (2) American Society of Mechanical Engineers, (3) American Institute of Chemical Engineers, (4) American Institue of Electrical Engineers, (5) American Institute of Mining and Metallurgical Engineers, and (6) the National Society of Professional Engineers.

Reference to the fact that the report was prepared under the auspices of the ECJ Committees was inadvertently ommitted from the August issue of The AMERICAN ENGINEER and in citing the source in the September magazine, the American Society of Mechanical Engineers and the American Institue of Electrical Engineers were not mentioned as being members of the committees. The AMERICAN ENGINEER sincerely regrets these omissions which were certainly unintentional.

Both of these articles were based on the 105 page booklet which was prepared by Mr. Frazer under the circumstances outlined above, and the charts which were reproduced in the articles were taken from the booklet.

Copies of the complete study, The Engineering Profession in Transition, may be obtained from any of the societies which are members of the EJC Committees.

NSPE Appointee

John B. Funk, NSPE member in Maryland, has just been named chief engineer in the Department of Public Improvments.

Letters from Readers

Neither THE AMERICAN ENGINEER *nor the National Society of Professional Engineers necessarily agrees with the comments, views, and opinions which are expressed by the writers whose letters are reproduced on this page. However, it is the magazine's policy to publish letters which it believes worth while, whether or not they agree with our opinions.*

The Ladies and the Annual Meeting

the Editor:

Ever since the Convention in Atta last December, I have watched erly for some account of the wonful entertainment arranged by the orgia Society for their guests. The business angle was very adetely covered, but the "fun angle" been sadly neglected. It is probly very light-minded of me, but I feel that some appreciation should expressed for the thought and rk that went into entertainment. The ladies were certainly most ciously cared for,—with a lovely shion Show and tea on one day, a luncheon and interesting sighting tour on the second day.

Then the buffet supper the first ht, at which we had an opportunity getting acquainted, as well as the usual entertainment provided by well-known Graham Jackson got ryone off to a good start.

After the dinner Friday night we oughly enjoyed an exhibition of k Dancing by the Promenade b—and what was still more fun, also had a chance to join in the are dances and reels—at least for long as we had breath enough! The dinner Saturday night was almost enjoyable, and at both dins we heard some very excellent s of general interest.

This covers only the high lights, every minute of our stay in Ata was made most delightful by thoughtfulness and kindness of Georgia Society.

Very sincerely yours,
HELEN L. LAWRIE
(Mrs. Ritchie Lawrie, Jr.)

Why Not the United States?

the Editor:

s we know all forty-eight states have some provision of legisn requiring the registration of fessional engineers.

uch legislative action was taken to protect the general public from a large number of persons calling themselves engineers who are not efficient and to prevent the public's paying large sums of money for construction while it has no protection against incompetence.

Such legislation will not become fully effective until the Congress of the United States passes a suitable Act regulating the employment of engineers by the various agencies of government in Washington.

If the forty eight states have found that it is proper to safeguard life, health and property by having engineers submit proper evidence of qualifications before permitting professional practice and granting registration, *why not the United States Government?*

Sincerely yours,
JOHN G. MONTGOMERY,
Washington, D. C.

Education and Water Conservation

To the Editor:

There are two articles in the July number of the American Engineer that deserve close study and careful consideration.

Dr. Harry T. Heald has discussed the education of the Engineer with the idea of such a broad base of usefulness, that no four or even six year course could be developed to prepare the young engineer to measure up to the ideal.

The high standard that the Doctor has pictured cannot be obtained in College, but the foundation can be so constructed that the young engineer can be inspired to use his college blue-print to continue his studies for the fulfillment of his special mission in the maturing technological age of useful technical placement.

Then there is the very interesting paper by Eng. Michael W. Straus, concerning the Federal Reclamation Service, that has evolved from the old pioneer diversion dam ditches to the present multiple purpose use of all phases of a complete water conservation program for all the beneficial uses of controlled waters.

These two papers are very much alike and yet so different. One is the theory of preparation, while the other is the practical application of all the theories and ideals that the university hinted at, plus the college-of-hard-knocks taught to the practicing engineer by his year after year experiences of solving human and technical problems with mountain rivers and deserts as his teacher. These are the lessons that cannot be taught in the University. It has taken years of practical experience to evolve the criteria of the Multiple-purpose reservoirs.

The natural engineers education is never finished, for every day he must study some new problem in order to progress with or keep in advance of the necessities of the expansion of technological development.

The writer has spent fifty years in the study and practice of Water Conservation Engineering and holds a license in that Branch in the State of Ohio, yet our Universities do not teach the branch of water conservation engineering and what a field that is for the young engineer that is now upon us.

Yours,
DAVID C. WARNER,
Water Conservation Consultant,
Ohio Dept. of Public Works,
401 State House Annex,
Columbus, Ohio.

Idaho Society Favors NSPE Affiliation

The Southwest Idaho Section of the Idaho Society of Engineers has voted in favor of affiliating with NSPE, reports from the state indicate.

This action on the part of the Section is the direct result of Executive Director Paul Robbins' recent Western trip. During this trip Mr. Robbins addressed the Southwest Section of the Idaho Society and outlined the program and policies of NSPE. The vote was taken at the group's May meeting.

New officers of the Southern Section for the coming year are: Linn F. Erickson of the state Bureau of Highways, chairman; Clyde Humphrey, Boise engineer, vice-chairman; and Earl Haroldsen, secretary.

Member State Societies N. S. P. E.

Officers and Directors

Arkansas

Max A. Mehlburger, Pres., 5417 Centerwood, LittleRock; L. N. White, Nat. Dir., 1906 Main St., Little Rock; Victor C. Anderson, Sec., 329 Gazette Bldg., Little Rock.

Connecticut

Clarence N. Wiley, Pres., Box 509, Milford; James D. Skinner, 127 Collingwood Ave., Bridgeport; L. Morton Reed, Sec., 42 Florence Ave., Devon.

District of Columbia

Herbert Manuccia, Pres. & Nat. Dir., 3900 Mt. Vernon Ave., Pres. Gardens, Alexandria, Va.; Charles H. Jennings, Sec., 3082 South Woodrow, Arlington, Va.

Georgia

Cherry L. Emerson, Pres., Georgia Tech, Atlanta; Wm. C. Cureton, Jr., Nat. Dir., Rt. 1, Rising Fawn; Charles E. Layton, Nat. Dir., City Hall, Thomasville; Ray L. Sweigert, Sec., Georgia Tech, Atlanta.

Illinois

Duncan M. Campbell, Pres., Dept. of Highways, 160 North LaSalle St., Chicago; W. A. Oliver, Nat. Dir., 201 Engineering Hall, Urbana; H. E. Babbitt, Sec., 204 Engr. Hall, Urbana.

Indiana

T. R. Jacobi, Pres., 5159 Carvel, Indianapolis 5; M. W. Cameron, Nat. Dir., R.R. 1, Box 105-A, New Augusta; J. B. Wilson, Ex. Sec., 10 West Ohio, Indianapolis 4.

Kansas

C. Y. Thomas, Pres., Box 604, Pittsburg; A. M. Meyers, Nat. Dir., K. C. Structural Steel Co., 21st & Met. St., Kansas City; E. E. Larson, Sec., Court House, Lawrence.

Maryland

Col. James A. Pratt, Pres., 310 Dixie Drive, Towson 4; Russell B. Allen, Nat. Dir., 4610 Hartwick Rd., College Park; Stewart W. Parker, Ex. Sec., 511 Murdock Rd., Baltimore 12; Dewitt Frank Swart, Sec., c/o Frank Schenuit Rubber Co., Woodbury, Baltimore.

Massachusetts

George E. Fox, Pres., Chapman Valve Mfg. Co., Indian Orchard; Wm. F. Ryan, Nat. Dir., c/o Stone & Webster Corp., 49 Federal St., Boston; Robert A. Spence, Sec., Harvard University, Lehman Hall, Cambridge 38.

Michigan

Stephen G. Szabo, Pres., General Motors Corp., Fisher Body Div., Detroit 2; Ivan N. Cuthbert, Nat. Dir., c/o Smith, Hinchman & Grylls, Inc., 800 Marquette Bldg., Detroit 26; Donald E. Trefey, Sec., 100 Farnsworth Ave., Detroit.

Minnesota

A. M. Kircher, Pres., 415 Van Brunt St., Mankato; S. L. Stolte, Nat. Dir., 1437 Marshall Ave., St. Paul, 4; Hibbert Hill, Nat. Dir., 4512 Wooddale Ave., Minneapolis; Richard R. Price, Ex. Sec., 1000 Guardian Bldg., St. Paul 1; Gordon Bodien, Sec., 1925 East 26th St., Minneapolis.

Missouri

C. G. Roush, Pres., 101 West 11th St., Kansas City; Bruce Williams, Nat. Dir., P.O. Box 264, Joplin; H. J. Bruegging, Sec., P. O. Box 365, Jefferson City.

Nevada

A. J. Shaver, Pres., 209 S. 3rd St., Las Vegas; J. A. Tiberti, Nat. Dir., Box 1662, Las Vegas; E. E. Keller, Sec., P. O. Box 882, Las Vegas.

New Jersey

Alonzo L. Jones, Pres., 6 Lawrence Ave., West Orange; C. George Krueger, Nat. Dir., 85 Van Reypen St., Jersey City 6; Joseph M. Cerreta, Nat. Dir., 163 W. Colfax Ave., Roselle Park; Daniel M. Kramer, Nat. Dir., 107 S. Gerard St., Woodbury; Frank C. Mirgain, Nat. Dir., 208 Lawrence Ave., Highland Park; Merton S. Adams, Sec., 9 Oakland St., Trenton 8.

New Mexico

G. Perry Steen, Pres., c/o Univ. of N.M., Albuquerque; W. C. Wagner, Nat. Dir., c/o Univ. of N.M., Albuquerque (Box 91); Walter K. Wagner, Sec., 1233 North Vassar, Albuquerque.

New York

Wm. H. Larkin, Pres., c/o B. F. Sturtevant Co., 420 Lexington Ave., New York City; Wm. H. Larkin, Nat. Dir.; Wm. W. Perry, Nat. Dir., 76 Cleveland Ave., Binghamton; Gardner C. George, Nat. Dir., P. O. Box 591, Albany; George Barrows, Ex. Sec., 1941 Grand Central Terminal, New York 17.

North Dakota

Leslie A. French, Pres., 815 Eighth St., Bismarck; John B. Jardine, Nat. Dir., 1910 First Ave. N., Fargo; George Neskey, Sec., Bismarck.

Ohio

John D. Coleman, Pres., 2520 Elsmer Dayton; John F. Hale, Nat. Dir., 500 M nicipal Bldg., Dayton; Lloyd A. Chace Ex. Sec., 63 South High St., Columbus.

Oklahoma

L. L. Dresser, Pres., P. O. Box 251 Tulsa 1; C. S. Worley, Nat. Dir., P. Box 1439, Oklahoma City; W. E. Bleakle Ex. Sec., 410 Commerce Exchange Bldg Oklahoma City.

Pennsylvania

Leroy F. Christman, Pres. & Nat. Di 101 Endlich Ave., Mt. Penn, Reading; J. Paine, Nat. Dir., 1430 N. Euclid Ave Pittsburgh 6; Ray M. Fuller, Nat. Dir., 5 North 16th St., Philadelphia 30; Milton M. Peters, Ex. Sec., 25 South 3rd S Harrisburg.

Rhode Island

Richard A. Phelan, Pres., 1063 Broad S Providence; Henry Ise, Nat. Dir., 15 Sl cum St., Providence; Vincent DiMas Sec., 201 Dean St., Providence 3.

Texas

W. A. Rounds, Pres., 1710 Fair Bldg Fort Worth; W. M. Andrews, Nat. Di 904 Union Natl. Bank Bldg., Houston; Ro ert Coltharp, Nat. Dir., 108 E. 10th S Austin; T. C. Forrest, Jr., Praetorian Bldg Dallas 1; E. E. Rosaire, Nat. Dir., 36 Ella Lee Lane, Houston; John J. Ledbette Jr., Ex. Sec., 504 Ewell Nalle Bldg., Austi

Washington

John O. Johnson, Pres., 1626 Calif. Ave Seattle 6; James G. McGivern, Nat. Di Gonzaga Univ., Spokane; DeWitt C. Gr fin, Sec., 717 Lloyd Bldg., Seattle 1.

West Virginia

Harry G. Kennedy, Pres., Kanawha Co Operators Assn., Kanawha Valley Bldg Charleston; P. K. Pierpont, Nat. Dir., 7 College Ave., Bluefield; Ross B. Johnsto Ex. Sec., Kanawha Hotel, Charleston.

Wisconsin

Walter A. Peirce, Pres., Manager Water Department, Racine; A. G. Behlin Nat. Dir., 2326 S. 7th St., Milwaukee Prof. Ben G. Elliott, Nat. Dir., 2302 Co monwealth Ave., Madison 5; O. J. Mue ge, Sec., 656 Crandall St., Madison 5.

Puerto Rico

C. Calor Mota, Pres., c/o Univ. Puerto Rico, Mayaguez; Salvador Q nones, Nat. Dir., 20 E. Leland St., Che Chase, Md.; Angel Silva, Ex. Sec., De of the Interior, Santurce

IEWS FROM THE VASHINGTON OFFICE

Before you receive the November ue of the AMERICAN ENGINEER Washington office will mail to h member of the Society his ballot for the annual election of officers of NSPE. It is requested that each member refer to the September issue of the AMERICAN ENGINEER for the nominating committee sections and their autobiographies.

At a recent meeting of the Board Directors of NSPE a constitunal change was proposed. It is be; included in the ballot for vote by NSPE membership.

As has been mentioned in this umn on several previous occasions, Washington office is endeavoring set up a membership record on adessograph plates which will permit tabulation of important informan regarding the composition of SPE. In order that this informan may be complete and usable ere will be enclosed with the ballot Membership Data card. It is reested that each member fill out s card and return it with his bal- so that these records may be tabted as rapidly as possible.

A new type ballot has been dened which permits more rapid unting and at the same time asres the members of a secret vote. is form of ballot also eliminates the cessity of one envelope, for each mber, thus making an appreciable ving in the cost of balloting.

Plans for the Annual Meeting re discussed at some length at a ent conference between Mr. Edrd Nunan of Buffalo, General airman of Program Arrangents, President Ritchie Lawrie and Executive Director. The Novem- issue of the American Engineer l be the Convention issue and will ry the complete program as well as additional details regarding the meeting. Members will be interested to note that there will be a buffet get-acquainted supper on Tuesday evening, December 4th.

The Board Meeting will occupy the entire day on December 5th, and December 6th is being devoted to the theme, "As Others See Us". The morning session on Saturday, December 6th, will be devoted to two outstanding speakers, one a top industrial executive and the other a member of one of our sister professions. The Saturday luncheon will have as its principle speaker an outstanding member of the Federal Government. The Saturday afternoon session will be devoted to the business necessary in the delegate's meeting of NSPE. Colonel Harold Hoffman, Ex-Governor of New Jersey, will be the principle speaker at the annual banquet on Saturday evening.

On Saturday, September 27th, your Executive Director met with the Membership Chairmen of the States comprising the northeastern area. A report of this meeting is carried in greater detail in this issue of the magazine, (see page 7), but the enthusiasm of these gentlemen and the programs which they are promoting indicate that the influence of NSPE will be expanded for the welfare of the profession. The total membership of the National Society continues to increase at an encouraging rate, approaching 16,500 members at this writing. The effects of the membership campaigns have not, as yet, reached the Washington office and indications are that the report of the Membership Chairmen at the Annual Meeting will be most encouraging.

It appears that the Executive Director will be traveling a good portion of October, visiting the Massachusetts Society, the Annual Meeting of the National Council State Boards of Engineering Examiners, the Annual meetings of the Missouri and the West Virginia Society of Professional Engineers.

Coming Events To Remember

National Meetings

December 4, 5 and 6. NSPE Annual Convention, Statler Hotel, Buffalo, N. Y.

State Meetings

October 24 & 25, N. Y. SSPE Autumn meeting, Hotel Utica, Utica, N. Y.

District of Columbia

The District of Columbia Society will hold its first meeting of the new fiscal year on Monday, September 22. This will be a business meeting and a full report on the present status of the D. C. Registration law is expected.

Georgia

More than 200 engineers, architects, land surveyors, and industrial leaders, together with their wives, were guests of the Macon Chapter, Georgia Society of Professional Engineers, at the Society's first summer meeting, held in Macon, Ga., August 15 and 16. According to Engineer W. P. Kennard, chairman of the arrangements committee, this initial summer affair was dedicated to promoting greater friendship and better understanding through two days of fun, good fellowship and sports.

Every one of the ten chapters of the State Society was represented. Among those present were Cherry L. Emerson, President of G. S. P. E. and Dean of Engineering of the Georgia School of Technology; Eugene W. O'Brien, President of the American Society of Mechanical Engineers; George H. Bond, past-president of the American Institute of Architects and vice-president of the Georgia Engineering Society; and Warren R. Neel, chief engineer of the Georgia State Highway Department.

The meeting started on Friday af-

ternoon, August 15, with registration at the Hotel Dempsey, followed by visits to points of interest in Macon and to some industrial plants. The tour covered the city auditorium, which has the world's largest copper dome; Wesleyan College, the oldest women's college in the world; Fort Hawkins, an Indian outpost in colonial days; and the Ocmulgee Indian ceremonial mounds.

The evening program on Friday started off with a sumptuous dinner attended by almost 200 members and guests. Following this, Chapter President Joel C. Beall introduced State President Cherry L. Emerson, who in turn introduced the guests of honor, Eugene W. O'Brien, George H. Bond and Warren R. Neel. Dean Emerson with great pride pointed out the progress made by the G. S. P. E. since its organization and how it has ten chapters today, was instrumental in getting state and Atlanta city authorities to pass up-to-date safety and fire codes, and was obtaining greater recognition from the public through appointment of members to state and local agencies. Mr. O'Brien, who had interrupted his tour of A. S. M. E. sections and meetings to be present, stated that the engineering profession is being united through the Engineers Joint Council, which has tackled some of the profession's most complex problems.

Mr. Bond indicated the great degree of cooperation existing between engineers and architects in Georgia and how it was resulting in higher standards of construction and better and safer living for the citizens of the state. Mr. Neel, in his official capacity as an official of the State of Georgia, thanked the Society and its chapters for their assistance in connection with highway work. He stated that the State, counties and cities were benefitting as a result of the work of G. S. P. E.

Through the generosity of many of Macon's industrial and retail establishments, all sorts of prizes were then distributed by drawing to both ladies and gentlemen present. The affair was concluded with dancing.

Early Saturday morning, August 16, the ladies went on shopping tours while the men visited industrial plants. The Burns Brick Co. acted as luncheon host in its brickyard to more than 200 at an old-fashioned fish fry. Everyone partook of breaded fried fish, hush puppies, cole slaw, potatoe chips, bread and cokes. The group then drove in their cars to the beautiful Idle Hour Country Club for an afternoon of golf, tennis, swimming and bridge.

The two-day function was concluded on Saturday evening with a barbecue and entertainment on the lawns of the country club. Delicious Brunswick stew, barbecued beef, potatoe chips and refreshments were served. Mrs. Carl H. Schofield did a wonderful job as mistress of ceremonies in distributing prizes to the winners in golf and bridge.

This first summer meeting proved to be such a success that already the Georgia members are talking about the 1948 affair, which the Savannah Chapter has offered to sponsor at Savannah Beach.

Members of Macon Chapter of G. S. P. E., who did such an excellent job on the 1947 Summer Meeting include Engineers Joel C. Beall, Orbie Bostick, Allen C. Brittain, Emory C. Council, Richard C. Cowan, Howard D. Cutter, Sr., Edmund W. Ellis, Ted R. English, T. D. Futch, Louis H. Graham, Henry Greene, W. K. Holt, T. Dennis Hays, W. H. Johnson, G. Paul Jones, Glenn W. Jones, W. P. Kennard, Wm. H. Kubler, Frank E. Lester, Albert W. McKay, A. L. Mullins, Cadesman Pope, Fenley Ryther, Carl H. Schofield, T. J. Stone, F. Marvin Turner, Francis B. West, Jr., Howard White, Jr., T. H. Winchester, J. A. Witherington, and William A. Young, all of Macon; J. R. Curtis, Montezuma; Louis Dozier and William L. Garrad, Dublin; Charles T. Edwards and Hugh C. Oxford, Monticello; Clarence D. Frobes, McIntyre; Leland I. Keefe, George E. McWhorter and E. W. Stembridge, Milledgeville; James C. Mattox, Louisville; and Glen H. Peavy, Byron.

Illinois

The Illinois Society has allotted $25 to each of its chapter membership chairmen for the purpose of entertaining prospective members at dinner meetings of the chapter. The money must be used to pay for the cost of the guests' dinners and may not be used to pay for speakers, expenses of visiting officers, or for other purposes. If the program proves effective, the Society expects to continue it and possibly increase the funds allotted during coming years.

* * *

A move is under way to form a chapter of the Illinois Society in Peoria—second largest city in the state. An organizational meeting was held on September 8. Many engineers engaged in the industrial plan of the city were present.

New Jersey

At the regular Trustees' meetin held in Trenton on June 20, Presider Jones appointed Engineer Richard I Higgins chairman of a special com mittee to meet with representative of the Architectural professior Other committee members are En gineers Amos Dixon, Stephen Neg rey, Daniel M. Kramer, and Edwar Wickland.

The overall purpose of the join meeting will be to discuss amicabl existing laws as they affect bot professions . . . and where necessar to initiate remedial measures tha will mutually benefit the two groups

* * *

Existing laws in New Jersey, a they pertain to the filing of plans an specifications with officials of a Ne Jersey State Governmental Agency do not recognize the seal of a Pro fessional Engineer when the submit ted plans are for construction or al teration of New Jersey school build ings. An NJSPE member has fo some time endeavored to have suc plans accepted because the work in volved was basically engineerin work. The New Jersey Societ Headquarters made frequent con tacts with responsible officials an was instrumental in securing a opinion from the Attorney Genera The net result is that the particula engineer's plans, insofar as they con cern engineering work, have bee ordered accepted and approved, an the work has already been starte

* * *

The New Jersey Engineer pub lishes a regular column entitled Posi tions Available and Positions Wanted Within one week of the mailing o the July issue, a half dozen re sponses from applicants and potentia employers were received. The im portance of utilizing State Societ journals and Headquarters as suc a clearing house cannot be over emphasized.

* * *

The 1947 NJSPE Land Survey ors' Conference will be held in th early part of December. Nationa Director Frank C. Mirgain as Stat Chairman promises a highly interest ing agenda . . . and as soon as i crystallizes, more pertinent informa tion will be forthcoming.

President Jones of NJSPE pre-
ted a Chapter charter to President
ez H. Collins of the newly formed
aware Valley Society of Profes-
ial Engineers at the New Jersey
ni-Annual Meeting held in Tren-
on September 20. The new chap-
comprises the counties of Glou-
ter and Salem. Ground work is
v being done for the formation of
w Jersey Chapters in Bergen,
rris, and Sussex Counties.

* * *

The new NJSPE Salaries and
es Schedule, published in the July
ie of the New Jersey Engineer,
met with high commendation on
sides. It will soon be printed in
nphlet form.

ew York

The Westchester County Chapter
the New York Society officially
ened the 1947-48 season with a
eting September 23. Those pres-
viewed a Westinghouse Electric
rporation film entitled "Radio
equency Heating." The film dis-
yed techniques for induction heat-
as applied to metals in such ap-
cations as brazing, selective heat
ating, case hardening, welding and
rging. It also dealt wth dielectric
ting which is applicable to non-
nductors.

* * *

The Monroe County Chapter of
New York Society met on Sep-
nber 30 in Rochester. Mr. David
Steinman, author of "The
ilders of the Bridge," the fasci-
ing story of the Roeblings and
ir famous bridges, was the
aker of the evening. The program
s divided into three parts:

. The experience of an author.
2. The story of the book, illustra-
with projected slides.
3. The radio transcription of the
valcade of America radio drama
ed on the book.

The radio transcription is a fore-
te of the drama of the movie
sion which is now being written
m Dr. Steinman's book.

io

Mr. Paul Black, safety supervisor
the Lima plant of the Westing-
se Electric Corporation, will
ak at Maumee Valley Chapter's
t meeting of the new season, to be
l on Friday, Sept. 26th, with din-
starting at 6:30. Mr. Black is a
l-known speaker in safety activ-
s throughout the state.

In conjunction with the talk will be the first showing in Lima, since its revision, of the sound film "Blueprint for Safety," illustrating various features of the safety program at Westinghouse that have won national awards for the local branch. It is felt that a study of these methods will prove a challenge to many of our members and afford an opportunity for them to compare and appraise the systems in use in their own organizations.

Oklahoma

Ralph Randall of Oklahoma City has been elected as the new Treasurer of the Oklahoma Society of Professional Engineers.

Mr. Randall's selection is the result of a special election held following the resignation of E. J. McConnell from the post. Mr. McConnell has moved to New York.

Texas

The Nueces Auxiliary to the Texas Society held its first regular meeting on Monday, October 6. Mr. Harry E. Graham, President of the Nueces Chapter was the guest speaker of the evening.

This first ladies auxiliary of an NSPE member group, is located in Corpus Christi, Texas. It was erroneously reported in the July AMERICAN ENGINEER that the group was headquartered in Nueces. It only derives its name from the county in which Corpus Christi is located, and shows its affiliation with the men's chapter in this way.

* * *

A. S. REYNOLDS ELECTRIC CO., Inc.
Electrical Engineers and Contractors
833 UNION STREET
BROOKLYN 15. N. Y.
Phone: SO uth 8-2110

MUrray HILL 2-4971-4972
WIELANDT CONSTRUCTION CO.
Inc.
MASON CONTRACTORS
50 East 42nd Street New York City

CEMENT GUN COMPANY
"GUNITE" CONTRACTORS
GENERAL OFFICES—ALLENTOWN, PENNA., U.S.A.

This pipe after BEING GUNITED CARRIED LOAD of 33,800 lbs. WITHOUT CRACKING or DEFLECTING
another pipe not gunited CRACKED and COLLAPSED with Load of 17,300 lbs.

"GUNITE" SAVES SEWER IN CANADA

The pictures tell the story. A 6-months old concrete pipe sewer line at Owen Sound, Ontario, was found to be failing under earth load. The tests shown above were made and convinced the city officials that a reinforced "GUNITE" lining would correct the trouble, and we did the job in 1934. The sewer was 36" and 48" diameters and one-half mile long.

"GUNITE" is ideal for lining and strengthening old brick or concrete sewers and has been widely used for this purpose.

Our 72-page bulletin E2300 describes scores of profitable uses of "GUNITE." Write for free copy.

MANUFACTURERS OF THE "CEMENT GUN"

NOV 5 1947

ARCHITECTS!!
ENGINEERS!!

try
CLODER'S
FINE PAPERS

No. 53
An inexpensive tracing paper, yellowish color for rough sketches in pencil, crayon or charcoal. Used by architects and engineers throughout the country. Standard roll is 42" by 50 yards—your cost, only $2.25 a roll. We will cut this roll to any size you want at no extra cost.

No. 405
Dalton Bond — medium weight — the finest 100% rag bond tracing paper ever made.

No. 406
Same as No. 405 but a little heavier. Prices are the same for both weights.

No. 405 and 406	Rolls 36"	Rolls 42"
20 yds.	$2.45	$2.75
50 "	5.50	5.95

WRITE FOR SAMPLE

CLODER
"Your Supply Store"

177 Broadway, N. Y. 7, N. Y.
WO. 2-0453

HOME LIGHTING KNOW-HOW
is part of your job
MR. ENGINEER!
RESIDENTIAL LIGHTING
by Myrtle Fahsbender
Director of Residential Lighting, Westinghouse Electric Corp., Lamp Division, and Member, Illuminating Engineering Society

Here is the most complete, useful, and interesting book ever published on home lighting—a really practical handbook that makes clear every detail of lighting in homes and apartments, large and small. Facts, figures, tables, charts and details on every phase of arrangement and design. More than 500 illustrations—269 big pages!

Examine this Book FREE

Let it prove its worth in your own hands! See how it puts at your command every practical fact and application of modern home lighting.

— — -MAIL THIS COUPON — — —
D. VAN NOSTRAND COMPANY
250 Fourth Avenue, New York 3, N. Y.
Please send me a copy of "RESIDENTIAL LIGHTING." Within 10 days I will either return it or send you $10.00 plus postage.
NAME .....
ADDRESS .....
CITY..... ZONE.... STATE.....
Am.E.—Oct. 1947

AEROFIN
CORPORATION
Syracuse New York

KENNEDY-RIEGGER DRILLING CO., Inc.
Diamond Drill & Core Borings
TEST BORINGS
5418 Post Road New York City
Telephone KI 9-8458

THE WIESNER-RAPP CO., Inc.
Designers and Builders
of
Chemical Processing Equipment
and
Textile Finishing Machinery
212 WINCHESTER AVE. BUFFALO 11, N. Y.

What's New For Engineers

Requests for further information concerning any item mentioned under this heading will be promptly referred to the manufacturer. It would be appreciated if inquiries be addressed on professional or company letterhead.

Send Inquiries Direct to American Engineer,
1359 Connecticut Ave., Washington, D. C.

HELICOPTER DESIGNS

A new booklet has been released containing three different designs for helicopters with manual and automatic blade pitch angle changing means. It is a 23 page 8 inches by 11 inches booklet containing 10 drawings, which show the application of the principles to variable speed steering and variable pitch steering of coaxial rotors, and to main and auxiliary rotors.

For further information address American Engineer, reference No. 1000.

STEAM PURIFIER BULLETIN

This Philadelphia Corporation has announced a new edition of its 12-page bulletin describing steam purification units for the removal of moisture and solids in steam lines. On live steam lines the purifier protects superheaters and turbines from slugs of water and boiler carryover. In exhaust and process steam lines, it is utilized for removal of entrain oil and other solids that might oth wise render the exhaust steam u usable in plant heating or other ap cations. Where steam demand var over wide ranges in short perio slugs of water are frequently carr over into steam lines from the boi steam-drum surface. Such an occ rence will blow out the heads engines and damage other types steam-using equipment. Oil conta inated engine exhaust can also made usable in direct-contact deaerating feedwater heaters and a for various process uses. Appli tion data, hook-up diagrams, insta tion photographs, and accessory d criptions are all included.

For further information address Am ican Engineer, reference No. 1001.

WATER SOFTENERS

This Company has just brought to date its existing data on the gr

PRINTED BY WATKINS PRINTING CO., BALTIMORE

d zeolite softening process and its vn zeolite softening equipment in new 20-page manual. The need for ater softening and the various vailable methods of treatment are viewed. Applications to boiler feed, ater-jacketed equipment, and pro-ssing in specific industries such as od canning, textile, laundries, and stitutions are briefly described. hree pages are devoted to the chem-try of the process, including the ftening, backwashing, brining, rins-g and the complete regeneration rocess. Cutaway views aid in nderstanding the operation of the quipment. The use of multiple units explained where the softening pro-ss cannot be interrupted for period-regeneration. A great number of stallation arrangements are shown y means of line diagrams, wash rawings, and actual installation hotographs. Complete dimensions, eights, and list prices are given in two-page table. The last four ages are devoted to abbreviated escriptions of a "package-unit" reens and zeolite softener specially dapted for treatment of relatively nall quantities of water. Flow rates, imension data, and list prices are milarly given on this unit.

For further information address American Engineer, reference 1002.

LININGS FOR INDUSTRIAL FURNACES

Simplified methods of quickly de-rmining the efficiency and econom-s of various types of refractory lin-gs for industrial furnaces are con-ined in the reprint of a lecture ven recently by the head of an im-ortant Engineering and Service De-artment.

For further information address American Engineer, reference No. 1003.

QUADRANT TYPE INDICATOR*

A quadrant type dial indicator hich has standard mounting dimen-ons is announced by this company. he instrument, designated as Mi-ronar, was designed by the manu-acturer to extend the field of ac-uracy which can be covered by a holly mechanical dial indicator. It thus suited for use on comparators d on fixtures for controlling espec-lly close tolerances. The instrument as an unusually high amplification tio for an instrument of the dial dicator type. The scale of the nglish unit model is divided into 001 inches steps and in the central ortion these intervals have been sub-vided to .00002 inches. Consistent peatability and accuracy in keeping with these fine divisions is offered. The effective range is .0018" inches, considered adequate for the fine checking for which the instrument is intended. The working advantages include the light weight hand which is instantly responsive and reaches its final position without noticeable fluttering. The dial is rotatable over a small angle by means of a fine adjusting screw which facilitates setting the instrument to a standard. It is furnished with a sapphire tipped contact point for wear resistance. In addition to the English model there is available a metric model graduated in .001mm and having a range of .04mm.

For further information address American Engineer, reference No. 1004.

NEW MILL MOTOR*

A larger and more efficient armature that fits within the limiting dimensions of the motor frame, new roller bearings, and redesigned field coils make this new motor strong in its line of mill motors. This heavy duty type motor is available totally enclosed, protected self-ventilated or protected force-ventilated construction. It is built in accordance with AISE standardized dimensions and incorporates the following features: split frame of cast steel; silicone insulated armature coil conductors; wedges of class B material to hold coils in slots; new roller bearing and bearing housing that eliminates need of thrust washer and collars; improved field coil insulation as well as the above mentioned features. It is available in sizes from 5 to 200 HP; in voltages of 230 and 550; and in AISE dimensions frames 602 to 618.

For further information address American Engineer, reference No. 1005.

* Items so marked are furnished by the editorial staff of the magazine *Production Equipment.*

PROFESSIONAL DIRECTORY

FRAZIER-SIMPLEX, INC.
436 East Beau Street
WASHINGTON, PENN.
Contracting and Consulting Engineers to the Glass and Steel Industries.

C. M. HATHAWAY *Consulting Engineer*
• PRODUCT DEVELOPMENT • PROJECT ENGINEERING • PRODUCTION DESIGNS
• PLANNING • TOOL AND METHODS ENGINEERING
ELECTRICAL -- MECHANICAL -- ELECTRONIC
facilities for research, model work & pilot manufacturing
1315 S. CLARKSON STREET • DENVER 10, COLORADO

PRESTRESSED CONCRETE
Shallow, crackless construction for heavy engineering. Long span traffic and pedestrian overpasses, trestles, underground garages and tunnels, piers and bulkheads, dams, airports, containers and ducts for liquids under pressure.
Detailed design and field supervision.
L. COFF, Consulting Engineer
198 BROADWAY, NEW YORK 7, N. Y.
Telephone: COrtland 7-2753

JAMES F. FOUHY
P.E. No. 7816
Attorney and Counsellor at Law
New York, Massachusetts, Federal Bars
Engineering and General Practice
Woolworth Building New York City

MADIGAN-HYLAND
Consulting Engineers
28-04 41st Avenue
Long Island City, New York

PARSONS, BRINCKERHOFF, HOGAN & MACDONALD
ENGINEERS
Traffic Reports — Bridges
Valuations — Tunnels
Power Developments — Subways
Industrial Buildings — Foundations
Water Supply — Dams
Harbor Works — Sewerage
142 Maiden Lane, New York
Calle Sur 17 No. 27, Caracas, Venezuela
Edificio Suarez Costa, Bogota, Colombia

DE LEUW, CATHER & COMPANY
Consulting Engineers
Transportation, Public Transit and Traffic Problems
Railroads — Grade Separations
Major Thoroughfares — Expressways
Subways — Tunnels
Power Plants — Municipal Works
20 North Wacker Drive, Chicago 6, Ill.

WILLIAM C. KAMMERER and Associates
CONSULTING ENGINEERS
Power Plants—Design, Supervision of Construction, Reports, Examinations, Investigations, Industrial and Public Utilities.
1900 Euclid Avenue, Cleveland 15, Ohio

D. B. STEINMAN
Consulting Engineer
BRIDGES
Design - Construction - Investigation
Reports - Strengthening Advisory Service
117 Liberty Street NEW YORK CITY

NOV 5 1947

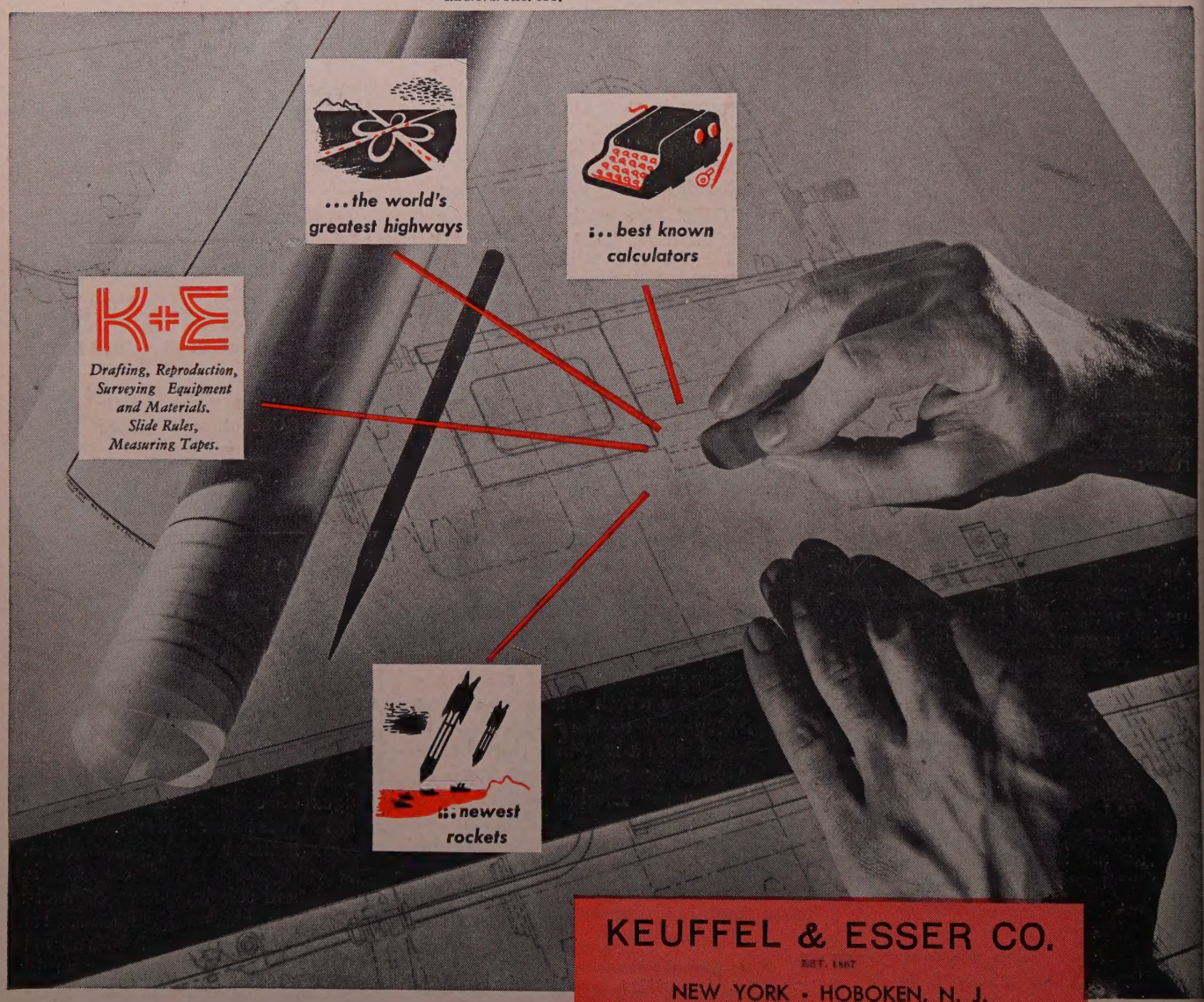
So clearly and unmistakably are draftsmen able to express their ideas on paper that their drawings have re-shaped the world. Through line, figure and symbol, draftsmen define the work to be done by the labor and machines of a nation. Assisting them to attain precision and clarity are drafting instruments that act almost as living extensions of their own hands...instruments that function figuratively as their partners in creating.

For 78 years Keuffel & Esser Co. drafting equipment and materials have been partners, in this sense, in shaping America, in making possible its swift-moving highway traffic, its speed in conducting business, its victorious might in war ... So universally is K & E equipment used, it is self-evident that every engineering project of any magnitude has materialized with the help of K & E. Could you wish any surer guidance than this in the selection of your own "drafting partners"?

You will find special advantages, for example, in PHOENIX* Tracing Cloth, which K & E has made almost "ghost-proof." Here is a cloth from which you can erase either pencil or ink lines without risking untidy "ghosts" on the prints, a cloth practically immune to stains from perspiration and water. You can even soak it in water for ten minutes at a time without harm! For further details about PHOENIX* Tracing Cloth, write on your letterhead to Keuffel & Esser Co., Hoboken, N. J.

partners in creating

*REG. U. S. PAT. OFF.


...the world's greatest highways
...best known calculators
K+E
Drafting, Reproduction, Surveying Equipment and Materials. Slide Rules, Measuring Tapes.
...newest rockets
KEUFFEL & ESSER CO.
EST. 1867
NEW YORK • HOBOKEN, N. J.
CHICAGO • ST. LOUIS • DETROIT • SAN FRANCISCO
LOS ANGELES • MONTREAL